

<110> Human Genome Sciences, Inc.

<120> Lyme Disease Vaccines

<130> PB481US

<140> 09/830,230

<141> 2001-04-24

<150> PCT/US98/12718

<151> 1998-06-18

<150> 60/057,483

<151> 1997-09-03

<150> 60/053,344

<151> 1997-07-22

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<170> PatentIn Ver. 2.0

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Lys Gln His Ile Pro Leu Phe Phe Tyr Ser Tyr Lys Val Lys Lys Gly
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Asp Thr Phe Phe Lys Ile Ala Asn Lys Ile Asn Gly Trp Gln Ser Gly
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Glu Ile Leu Ile Pro Ser Lys Lys Gly Val Phe Val Phe Asp Ser Lys
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Asn Lys Tyr Arg Glu Phe Phe Ile Gly Pro Lys Thr Ser Phe Lys Phe
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Val Glu Asp Ile Lys Glu Asn Lys Lys His Asn Ile Lys Gly Asp Arg
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 Asp His Asp Ser Glu Val Lys Leu Ile Leu Lys Glu Asn Gly Tyr Arg
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Thr Lys Met Ile Lys Glu Asn Pro Tyr Lys Arg Tyr Lys Asp Asp Asp
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caaaatggtt	gtgcagcact	acaccccgct	atgcttgcaa	taatgatagc	accaactcag	1020
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gcaatgaact	ttccagtggg	attggttagga	cttgtaatat	ctgttgagcc	tataattgac	1200
atgggaagaa	cagctgttaa	tgtaggcggc	tcaatgcttg	caggcggttat	atctgctaaa	1260
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 35 40 45
 Gly Gly Phe Phe Asp Asn Pro Asn Thr Met Ile Ser Arg Thr Gln Glu
 50 55 60
 Glu Phe Glu Lys Thr Gly Ile Ser Val Lys Thr Asn His Glu Val Ile
 65 70 75 80
 Lys Val Asp Ala Lys Asn Asn Thr Ile Val Ile Lys Asn Gln Lys Thr
 85 90 95
 Gly Thr Ile Phe Asn Asn Thr Tyr Asp Gln Leu Met Ile Ala Thr Gly
 100 105 110
 Ala Lys Pro Ile Ile Pro Pro Ile Asn Asn Ile Asn Leu Glu Asn Phe
 115 120 125
 His Thr Leu Lys Asn Leu Glu Asp Gly Gln Lys Ile Lys Lys Leu Met
 130 135 140
 Asp Arg Glu Glu Ile Lys Asn Ile Val Ile Ile Gly Gly Gly Tyr Ile
 145 150 155 160
 Gly Ile Glu Met Val Glu Ala Ala Lys Asn Lys Arg Lys Asn Val Arg
 165 170 175
 Leu Ile Gln Leu Asp Lys His Ile Leu Ile Asp Ser Phe Asp Glu Glu
 180 185 190
 Ile Val Thr Ile Met Glu Glu Glu Leu Thr Lys Lys Gly Val Asn Leu
 195 200 205
 His Thr Asn Glu Phe Val Lys Ser Leu Ile Gly Glu Lys Lys Ala Glu
 210 215 220
 Gly Val Val Thr Asn Lys Asn Thr Tyr Gln Ala Asp Ala Val Ile Leu
 225 230 235 240
 Ala Thr Gly Ile Lys Pro Asp Thr Glu Phe Leu Glu Asn Gln Leu Lys
 245 250 255
 Thr Thr Lys Asn Gly Ala Ile Ile Val Asn Glu Tyr Gly Glu Thr Ser
 260 265 270
 Ile Lys Asn Ile Phe Ser Ala Gly Asp Cys Ala Thr Ile Tyr Asn Ile
 275 280 285
 Val Ser Lys Lys Asn Glu Tyr Ile Pro Leu Ala Thr Thr Ala Asn Lys
 290 295 300
 Leu Gly Arg Ile Val Gly Glu Asn Leu Ala Gly Asn His Thr Ala Phe
 305 310 315 320
 Lys Gly Thr Leu Gly Ser Ala Ser Ile Lys Ile Leu Ser Leu Glu Ala
 325 330 335

Ala Arg Thr Gly Leu Thr Glu Lys Asp Ala Lys Lys Leu Gln Ile Lys
340 345 350

Tyr Lys Thr Ile Phe Val Lys Asp Lys Asn His Thr Asn Tyr Tyr Pro
355 360 365

Gly Gln Glu Asp Leu Tyr Ile Lys Leu Ile Tyr Glu Glu Asn Thr Lys
370 375 380

Ile Ile Leu Gly Ala Gln Ala Ile Gly Lys Asn Gly Ala Val Ile Arg
385 390 395 400

Ile His Ala Leu Ser Ile Ala Ile Tyr Ser Lys Leu Thr Thr Lys Glu
405 410 415

Leu Gly Met Met Asp Phe Ser Tyr Ser Pro Pro Phe Ser Arg Thr Trp
420 425 430

Asp Ile Leu Asn Ile Ala Gly Asn Ala Ala Lys
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<213> Homo sapiens

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35 40 45

Gln Glu Glu Phe Glu Lys Thr Gly Ile Ser Val Lys Thr Asn His Glu
50 55 60

Val Ile Lys Val Asp Ala Lys Asn Asn Thr Ile Val Ile Lys Asn Gln
65 70 75 80

Lys Thr Gly Thr Ile Phe Asn Asn Thr Tyr Asp Gln Leu Met Ile Ala
85 90 95

Thr Gly Ala Lys Pro Ile Ile Pro Pro Ile Asn Asn Ile Asn Leu Glu
100 105 110

Asn Phe His Thr Leu Lys Asn Leu Glu Asp Gly Gln Lys Ile Lys Lys
115 120 125

Leu Met Asp Arg Glu Glu Ile Lys Asn Ile Val Ile Ile Gly Gly Gly
130 135 140

Tyr Ile Gly Ile Glu Met Val Glu Ala Ala Lys Asn Lys Arg Lys Asn
145 150 155 160

Val Arg Leu Ile Gln Leu Asp Lys His Ile Leu Ile Asp Ser Phe Asp
165 170 175

Glu Glu Ile Val Thr Ile Met Glu Glu Glu Leu Thr Lys Lys Gly Val
 180 185 190
 Asn Leu His Thr Asn Glu Phe Val Lys Ser Leu Ile Gly Glu Lys Lys
 195 200 205
 Ala Glu Gly Val Val Thr Asn Lys Asn Thr Tyr Gln Ala Asp Ala Val
 210 215 220
 Ile Leu Ala Thr Gly Ile Lys Pro Asp Thr Glu Phe Leu Glu Asn Gln
 225 230 235 240
 Leu Lys Thr Thr Lys Asn Gly Ala Ile Ile Val Asn Glu Tyr Gly Glu
 245 250 255
 Thr Ser Ile Lys Asn Ile Phe Ser Ala Gly Asp Cys Ala Thr Ile Tyr
 260 265 270
 Asn Ile Val Ser Lys Lys Asn Glu Tyr Ile Pro Leu Ala Thr Thr Ala
 275 280 285
 Asn Lys Leu Gly Arg Ile Val Gly Glu Asn Leu Ala Gly Asn His Thr
 290 295 300
 Ala Phe Lys Gly Thr Leu Gly Ser Ala Ser Ile Lys Ile Leu Ser Leu
 305 310 315 320
 Glu Ala Ala Arg Thr Gly Leu Thr Glu Lys Asp Ala Lys Lys Leu Gln
 325 330 335
 Ile Lys Tyr Lys Thr Ile Phe Val Lys Asp Lys Asn His Thr Asn Tyr
 340 345 350
 Tyr Pro Gly Gln Glu Asp Leu Tyr Ile Lys Leu Ile Tyr Glu Glu Asn
 355 360 365
 Thr Lys Ile Ile Leu Gly Ala Gln Ala Ile Gly Lys Asn Gly Ala Val
 370 375 380
 Ile Arg Ile His Ala Leu Ser Ile Ala Ile Tyr Ser Lys Leu Thr Thr
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 Lys Glu Leu Gly Met Met Asp Phe Ser Tyr Ser Pro Pro Phe Ser Arg
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 acctgtggcc tgccttactt tgtgggggga ttctttgaca accccaatac aatgatctca 180
 agaacacaag aagaattcga aaaaactgga atctctgtta aaactaacca cgaagttatc 240
 aaagtagatg caaaaaacaa tacaattgta ataaaaaatc aaaaaacagg aaccattttt 300
 aacaatactt acgatcaact tatgatagca actggtgcaa aacctattat tccaccaatc 360

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gataagcaca tactcataga ttcttttgac gaagaaatag tcacaataat ggaagaagaa 600
ctaacaaaaa aggggggttaa tcttcataca aatgagtttg taaaaagttt aataggagaa 660
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acagccaaca aacttggaag aatagttggt gaaaatttag ctgggaatca tacagcattt 960
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attcatgctt tatcaattgc aatctattca aaacttacaa caaaagagct agggatgatg 1260
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<210> 24

<211> 1290

<212> DNA

<213> Homo sapiens

<400> 24

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cccaatacaa tgatctcaag aacacaagaa gaattcgaaa aaactggaat ctctgttaaa 180
actaaccacg aagttatcaa agtagatgca aaaaaacata caattgtaat aaaaaatcaa 240
aaaacaggaa ccatttttta caatacttac gatcaactta tgatagcaac tggtgcaaaa 300
cctattattc caccaatcaa taatatcaat ctagaaaatt ttcatactct gaaaaattta 360
gaagacggtc aaaaaataaa aaaattaatg gatagagaag agattaaaaa tatagtata 420
attggtgggtg gatacattgg aattgaaatg gtagaagcag caaaaaataa aagaaaaaat 480
gtaagattaa ttcaactaga taagcacata ctcatagatt cttttgacga agaaatagtc 540
acaataatgg aagaagaact aacaaaaaag ggggttaatc ttcatacaaa tgagtttgta 600
aaaagttaa taggagaaaa aaaggcagaa ggagtagtaa caaacaaaaa tacttatcaa 660
gctgacgctg ttatacttgc taccggaata aaacctgaca ctgaattttt agaaaaccag 720
cttaaaacta ctaaaaatgg agcaataatt gtaaattgagt atggcgaaac tagcataaaa 780
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tacataccct tggcaacaac agccaacaaa cttggaagaa tagttggtga aaatttagct 900
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gaagctgcaa gaacaggact tacagaaaaa gatgcaaaaa agctccaaat aaaatataaa 1020
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<210> 25

<211> 440

<212> PRT

<213> Homo sapiens

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Val Leu Ile Met Phe Ile Gly Ser Leu Leu Leu Met Leu Pro Ile Ser
  20                      25                      30

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Trp Glu Gly Asp Gly Lys Leu Ala Tyr Ile Asp Ala Leu Phe Thr Ala

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Val	Ser	Ala	Val	Ser	Ile	Thr	Gly	Leu	Thr	Thr	Val	Lys	Met	Glu	Gly
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Phe	Ser	Thr	Phe	Gly	Phe	Ile	Leu	Ile	Met	Leu	Leu	Ile	Gln	Leu	Gly
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Gly	Leu	Gly	Phe	Ile	Ser	Ile	Thr	Thr	Phe	Tyr	Leu	Leu	Ile	Pro	Lys
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Lys	Lys	Met	Asn	Leu	Thr	Asp	Ala	Arg	Ile	Ile	Lys	Gln	Tyr	Ser	Leu
			100					105					110		
Ser	Asn	Ile	Glu	Tyr	Asn	Pro	Ile	Arg	Ile	Leu	Lys	Ser	Ile	Leu	Phe
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Ile	Thr	Phe	Ser	Ile	Glu	Met	Ile	Gly	Leu	Ile	Leu	Ile	Leu	Ile	Cys
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Phe	Lys	Leu	Arg	Gly	Val	Asn	Ile	Ser	Phe	Leu	Glu	Ala	Leu	Phe	Thr
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Thr	Ile	Ser	Ala	Phe	Cys	Asn	Ala	Gly	Phe	Ser	Met	His	Ser	Glu	Ser
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Ile	Tyr	Ala	Trp	Arg	Asp	Val	Pro	Glu	Ala	Ile	Val	Val	Val	Ser	Ile
			180					185					190		
Leu	Ile	Ile	Cys	Gly	Gly	Leu	Gly	Phe	Met	Val	Tyr	Arg	Asp	Val	Asn
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Asn	Thr	Ile	Lys	Asn	Lys	Lys	Lys	Leu	Ser	Leu	His	Ala	Lys	Ile	Val
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Phe	Ser	Leu	Ser	Phe	Phe	Leu	Ile	Ile	Ile	Gly	Ala	Ile	Leu	Phe	Phe
225					230					235					240
Phe	Thr	Glu	Met	His	Lys	Leu	Lys	Ala	Gly	Tyr	Ser	Met	Ser	Thr	Leu
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Ile	Phe	Asn	Ser	Ile	Phe	Tyr	Ser	Ile	Ser	Thr	Arg	Thr	Ala	Gly	Phe
		260						265					270		
Asn	Tyr	Leu	Asp	Asn	Ser	Leu	Ile	Ser	Gly	Arg	Thr	Gln	Ile	Ile	Ser
		275					280					285			
Leu	Pro	Phe	Met	Phe	Ile	Gly	Gly	Ala	Pro	Gly	Ser	Thr	Ala	Gly	Gly
	290					295					300				
Ile	Lys	Ile	Thr	Thr	Phe	Phe	Leu	Ile	Val	Leu	Ala	Val	Val	Lys	Asn
305					310					315					320
Gln	Asn	Gly	Asn	Gly	Tyr	Ile	Ile	Gly	Ser	Tyr	Lys	Val	Ser	Ile	Asp
			325						330					335	
Ser	Ile	Arg	Phe	Ala	Leu	Leu	Phe	Phe	Ala	Arg	Ala	Ile	Phe	Ile	Leu
			340					345					350		
Ser	Phe	Ser	Phe	Phe	Met	Leu	Leu	Phe	Phe	Glu	Gly	Gly	Ser	Gly	Asn

355	360	365
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370	375	380
Val Gly Leu Ser Val Gly Val Thr Gln Asp Leu Ser Phe Trp Gly Lys		
385	390	395 400
Val Ile Ile Ile Phe Thr Met Phe Ala Gly Arg Ile Gly Leu Phe Ser		
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Met Ala Val Phe Val Ser Arg Lys Ser Arg Phe Glu Glu Phe Thr Arg		
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Pro Arg Gln Asp Ile Leu Val Gly		
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Phe Ser Thr Phe Gly Phe Ile Leu Ile Met Leu Leu Ile Gln Leu Gly		
35	40	45
Gly Leu Gly Phe Ile Ser Ile Thr Thr Phe Tyr Leu Leu Ile Pro Lys		
50	55	60
Lys Lys Met Asn Leu Thr Asp Ala Arg Ile Ile Lys Gln Tyr Ser Leu		
65	70	75 80
Ser Asn Ile Glu Tyr Asn Pro Ile Arg Ile Leu Lys Ser Ile Leu Phe		
85	90	95
Ile Thr Phe Ser Ile Glu Met Ile Gly Leu Ile Leu Ile Leu Ile Cys		
100	105	110
Phe Lys Leu Arg Gly Val Asn Ile Ser Phe Leu Glu Ala Leu Phe Thr		
115	120	125
Thr Ile Ser Ala Phe Cys Asn Ala Gly Phe Ser Met His Ser Glu Ser		
130	135	140
Ile Tyr Ala Trp Arg Asp Val Pro Glu Ala Ile Val Val Val Ser Ile		
145	150	155 160
Leu Ile Ile Cys Gly Gly Leu Gly Phe Met Val Tyr Arg Asp Val Asn		
165	170	175
Asn Thr Ile Lys Asn Lys Lys Lys Leu Ser Leu His Ala Lys Ile Val		
180	185	190
Phe Ser Leu Ser Phe Phe Leu Ile Ile Ile Gly Ala Ile Leu Phe Phe		

195	200	205
Phe Thr Glu Met His Lys Leu Lys Ala Gly Tyr Ser Met Ser Thr Leu		
210	215	220
Ile Phe Asn Ser Ile Phe Tyr Ser Ile Ser Thr Arg Thr Ala Gly Phe		
225	230	235 240
Asn Tyr Leu Asp Asn Ser Leu Ile Ser Gly Arg Thr Gln Ile Ile Ser		
	245	250 255
Leu Pro Phe Met Phe Ile Gly Gly Ala Pro Gly Ser Thr Ala Gly Gly		
	260	265 270
Ile Lys Ile Thr Thr Phe Phe Leu Ile Val Leu Ala Val Val Lys Asn		
	275	280 285
Gln Asn Gly Asn Gly Tyr Ile Ile Gly Ser Tyr Lys Val Ser Ile Asp		
	290	295 300
Ser Ile Arg Phe Ala Leu Leu Phe Phe Ala Arg Ala Ile Phe Ile Leu		
305	310	315 320
Ser Phe Ser Phe Phe Met Leu Leu Phe Phe Glu Gly Gly Ser Gly Asn		
	325	330 335
Trp Lys Val Ile Asp Leu Gly Tyr Glu Val Phe Ser Ala Phe Gly Thr		
	340	345 350
Val Gly Leu Ser Val Gly Val Thr Gln Asp Leu Ser Phe Trp Gly Lys		
	355	360 365
Val Ile Ile Ile Phe Thr Met Phe Ala Gly Arg Ile Gly Leu Phe Ser		
	370	375 380
Met Ala Val Phe Val Ser Arg Lys Ser Arg Phe Glu Glu Phe Thr Arg		
385	390	395 400
Pro Arg Gln Asp Ile Leu Val Gly		
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 <211> 1323
 <212> DNA
 <213> Homo sapiens

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 aaaatggaag gcttttctac ttttggattt attttgataa tgttgcta at ccagcttggg 240
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 agaattttta aaagcatatt gtttataact ttttcaattg aaatgatagg ttttaattata 420
 atacttattt gttttaaact taggggagtg aatatttcat tcttagaggc tttgtttacg 480
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 tttatggctc atagagatgt aaataacact attaaaaaca aaaaaaaact atcgcttcat 660
 gccaaagatag ttttttcttt aagcttcttt ttaattataa ttggtgcaat tttatttttt 720
 tttacagaga tgcataaatt aaaagctggg tattcaatga gcactttaat atttaattca 780

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 <211> 1227
 <212> DNA
 <213> Homo sapiens

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 ataattgttg taatccagct tggggggactt ggattttataa gtattactac tttttatttg 180
 cttataccta aaaagaaaaat gaatttaaca gatgcaagaa taataaagca gtattccctt 240
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 <212> PRT
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 Leu Ser Ile Leu Ser Lys Asn Gly Lys Gly Ser Val Tyr Leu Lys Val
 35 40 45
 Ser Lys Ser Ser Asp Tyr Ile Leu Thr Leu Asp Lys Ser Ser Asn Ser
 50 55 60
 Asp Phe Val Phe Lys Ile Tyr Asp Ile Ser Asn Lys Lys Tyr Ile Thr
 65 70 75 80

Asp Lys Val Lys Arg Arg Asp Phe Lys Ile Arg Leu Asp Lys Asn Ser
 85 90 95
 Leu Tyr Ala Ile Ile Tyr Val Gly Thr Lys Asn Glu Asn Ile Lys Phe
 100 105 110
 Ser Leu Thr Asp Leu Asp Phe Ser Ile Leu Ser Ser Asp Ser Leu Lys
 115 120 125
 Ala Lys Thr Ser Lys Ile Glu Lys Glu Asp Leu Phe Phe Thr Leu Lys
 130 135 140
 Asp Leu Pro Val Leu Asn Leu Thr Ala Lys Leu Lys Lys Tyr Val Leu
 145 150 155 160
 Arg Ile Tyr Lys Ser Asn Ile Tyr Ile Ala Tyr Gln Leu Glu Asn Ser
 165 170 175
 Asp Asp Ile Lys Val Ala Glu Phe Ile Glu Asp Val Gly Trp Phe Asn
 180 185 190
 Leu Asp Ser Ser Val Asn Arg Asn Ile Thr Asn Ile Val Asn Phe Asp
 195 200 205
 Phe Ser Ile Asn Ser Lys Gly Asn Leu Tyr Ile Ala Phe Val Thr Lys
 210 215 220
 Ser Gly Ala Asp Phe Ala Ser Glu Leu Ile Val Lys Lys Phe Asn Ser
 225 230 235 240
 Arg Lys Trp Ile Asp Ile Ser Pro Gly His Ile Glu Asn Phe Gly Ser
 245 250 255
 Leu Leu Asn Ile Ser Ile Asp Leu Lys Asp Arg Leu Tyr Leu Ala Tyr
 260 265 270
 Leu Arg Glu Ile Arg Gly Glu Tyr Lys Ile Asn Leu Ile Ser Asn Met
 275 280 285
 Gly Tyr Gly Ser Ile Trp Thr Asp Val Ile His Ala Tyr Leu Ser Lys
 290 295 300
 Gly Asp Ser Asn Val Asn Ser Ser Asn Ile Gly Leu Ile Ser Glu Pro
 305 310 315 320
 Phe Leu Gly Ile Phe Tyr Asn Tyr Lys Ser Asn Asn Glu Ile Lys Ser
 325 330 335
 Glu Phe Ile Val Asn Asn Glu Asn Ala Trp Val Asn Ala Asn Ile Pro
 340 345 350
 Ser Val Tyr Met Ala Asn Phe Ile Lys Gly Phe Phe Asp Ser Asn Phe
 355 360 365
 Asn Gln Ile Ile Met Ser Phe Val Ser Glu Asn Arg Pro Ile Val Asn
 370 375 380
 Ile Cys Pro Leu Lys Ser Ser Arg Trp Ile Asn Ile Ser Pro Asn Val
 385 390 395 400

Glu Met Glu Gly Leu Ser Ala Asp Ile Gly Leu Tyr Lys Asn Asn Leu
 405 410 415

Phe Leu Ala Phe Glu Asp Asn Asn Asn Val Arg Leu Ile Tyr Phe Lys
 420 425 430

Asn Lys Asn Trp Tyr Phe Leu Asn Lys Leu Glu Asn Phe Lys Ser Asn
 435 440 445

Val Lys Ser Pro Gln Ile Gly Ile Tyr Gly Asn Gln Gly Leu Val Ile
 450 455 460

Ser Thr Leu Ser Ser Asn Ser Asn Glu Leu Phe Phe Thr Leu Ile Cys
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Gln

<210> 30

<211> 458

<212> PRT

<213> Homo sapiens

<400> 30

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Gly Lys Gly Ser Val Tyr Leu Lys Val Ser Lys Ser Ser Asp Tyr Ile
 20 25 30

Leu Thr Leu Asp Lys Ser Ser Asn Ser Asp Phe Val Phe Lys Ile Tyr
 35 40 45

Asp Ile Ser Asn Lys Lys Tyr Ile Thr Asp Lys Val Lys Arg Arg Asp
 50 55 60

Phe Lys Ile Arg Leu Asp Lys Asn Ser Leu Tyr Ala Ile Ile Tyr Val
 65 70 75 80

Gly Thr Lys Asn Glu Asn Ile Lys Phe Ser Leu Thr Asp Leu Asp Phe
 85 90 95

Ser Ile Leu Ser Ser Asp Ser Leu Lys Ala Lys Thr Ser Lys Ile Glu
 100 105 110

Lys Glu Asp Leu Phe Phe Thr Leu Lys Asp Leu Pro Val Leu Asn Leu
 115 120 125

Thr Ala Lys Leu Lys Lys Tyr Val Leu Arg Ile Tyr Lys Ser Asn Ile
 130 135 140

Tyr Ile Ala Tyr Gln Leu Glu Asn Ser Asp Asp Ile Lys Val Ala Glu
 145 150 155 160

Phe Ile Glu Asp Val Gly Trp Phe Asn Leu Asp Ser Ser Val Asn Arg
 165 170 175

Asn Ile Thr Asn Ile Val Asn Phe Asp Phe Ser Ile Asn Ser Lys Gly
 180 185 190

Asn Leu Tyr Ile Ala Phe Val Thr Lys Ser Gly Ala Asp Phe Ala Ser
 195 200 205
 Glu Leu Ile Val Lys Lys Phe Asn Ser Arg Lys Trp Ile Asp Ile Ser
 210 215 220
 Pro Gly His Ile Glu Asn Phe Gly Ser Leu Leu Asn Ile Ser Ile Asp
 225 230 235 240
 Leu Lys Asp Arg Leu Tyr Leu Ala Tyr Leu Arg Glu Ile Arg Gly Glu
 245 250 255
 Tyr Lys Ile Asn Leu Ile Ser Asn Met Gly Tyr Gly Ser Ile Trp Thr
 260 265 270
 Asp Val Ile His Ala Tyr Leu Ser Lys Gly Asp Ser Asn Val Asn Ser
 275 280 285
 Ser Asn Ile Gly Leu Ile Ser Glu Pro Phe Leu Gly Ile Phe Tyr Asn
 290 295 300
 Tyr Lys Ser Asn Asn Glu Ile Lys Ser Glu Phe Ile Val Asn Asn Glu
 305 310 315 320
 Asn Ala Trp Val Asn Ala Asn Ile Pro Ser Val Tyr Met Ala Asn Phe
 325 330 335
 Ile Lys Gly Phe Phe Asp Ser Asn Phe Asn Gln Ile Ile Met Ser Phe
 340 345 350
 Val Ser Glu Asn Arg Pro Ile Val Asn Ile Cys Pro Leu Lys Ser Ser
 355 360 365
 Arg Trp Ile Asn Ile Ser Pro Asn Val Glu Met Glu Gly Leu Ser Ala
 370 375 380
 Asp Ile Gly Leu Tyr Lys Asn Asn Leu Phe Leu Ala Phe Glu Asp Asn
 385 390 395 400
 Asn Asn Val Arg Leu Ile Tyr Phe Lys Asn Lys Asn Trp Tyr Phe Leu
 405 410 415
 Asn Lys Leu Glu Asn Phe Lys Ser Asn Val Lys Ser Pro Gln Ile Gly
 420 425 430
 Ile Tyr Gly Asn Gln Gly Leu Val Ile Ser Thr Leu Ser Ser Asn Ser
 435 440 445
 Asn Glu Leu Phe Phe Thr Leu Ile Cys Gln
 450 455

<210> 31
 <211> 1446
 <212> DNA
 <213> Homo sapiens

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 aaaggaagtg tttacttaaa agtttagcaaa tcttcgatt atattttaac cctagataag 180

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agttcaaatt ccgattttgt ttttaaaatt tatgacattt ctaataaaaa atatataacc 240
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atatatgttg gtactaaaaa tgaaaacata aagttttcgc ttacagattt agatttttca 360
attttaagta gcgattccct gaaagctaaa acatctaaga ttgaaaaaga agattttattt 420
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aggattttata aaagcaatat ttatatgtct tatcagctag aaaatagcga tgatattaaa 540
gttgctgaat ttattgagga tgttggttgg tttaatcttg attcatctgt taatagaaat 600
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caatga 1446

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<210> 32
 <211> 1377
 <212> DNA
 <213> Homo sapiens

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tccgattttg tttttaaaat ttatgacatt tctaataaaa aatatataac cgataaagta 180
aaaagaagag attttaaaat aagattagat aaaaattctc tttatgcaat aatatattgt 240
ggtactaaaa atgaaaacat aaagttttcg cttacagatt tagatttttc aattttaagt 300
agcgattccc tgaaagctaa aacatctaag attgaaaaag aagatttatt ttttacttta 360
aaagatttgc ctgtttttaa ttttaactgc aagcttaaaa aatatgtatt aaggatttat 420
aaaagcaata ttttatattg ttatcagcta gaaaatagcg atgatattaa agttgctgaa 480
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attgatatta gtcctgggtc catagaaaaa tttggatctt tattaaatat tagcattgat 720
ttaaagata ggttggtatt agcatattta agggaaatta ggggtgaata taaaattaat 780
ttaatctcga atatgggtta cggaagtatt tggaccgatg taatacatgc ttatttaagt 840
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aatgcttggg taaatgcaaa tattccttct gtttatatgg ccaattttat taaaggcttt 1020
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aacatttgtc ctttgaaaag tagtagatgg attaatataa gtcctaattg tgaaatggaa 1140
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aataatgtga gattaattta ttttaagaat aaaaattggg attttttaaa taagcttgag 1260
aattttaaga gtaatgttaa aagccctcag attggaattt atggcaatca agggcttgta 1320
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<210> 33
 <211> 454
 <212> PRT
 <213> Homo sapiens

<400> 33
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Ile Val Ser Phe Val Gly Ile Leu Leu Ile Tyr Ser Ser Asp Tyr Asn	35	40	45
Ile Ser Gly Ser Leu Thr Lys Asn Glu Tyr Ile Lys Gln Thr Phe Trp	50	55	60
Val Ile Ile Gly Phe Phe Leu Ile Phe Ile Val Gly Lys Tyr Asp Leu	65	70	75
Lys Phe Val Tyr Ser Met Val Tyr Pro Leu Tyr Phe Leu Leu Ile Leu	85	90	95
Ala Leu Ile Phe Thr Ala Phe Phe Gly Met Thr Val Asn Gly Ala Arg	100	105	110
Ser Trp Ile Gly Ile Trp Lys Leu Gly Gly Gln Pro Ser Glu Phe Gly	115	120	125
Lys Val Val Ile Ile Leu Thr Leu Ser Lys Phe Tyr Thr Glu Lys Lys	130	135	140
Gly Tyr Asn Glu Phe Phe Thr Phe Ile Thr Ala Phe Leu Leu Ile Phe	145	150	155
Pro Ser Val Ile Leu Ile Leu Leu Gln Pro Asp Phe Gly Thr Ala Ile	165	170	175
Val Tyr Leu Thr Ile Phe Ile Phe Ile Ser Phe Phe Ala Gly Ile Asp	180	185	190
Leu His Tyr Val Leu Ala Phe Ala Leu Ile Gly Phe Phe Ser Phe Val	195	200	205
Phe Ala Ile Leu Pro Val Trp Tyr Glu Tyr Lys Val Asn Met Gly Asn	210	215	220
Val Phe Tyr Leu Ile Phe Ser Asn Pro Phe Tyr Phe Arg Val Ile Met	225	230	235
Gly Val Leu Leu Leu Ile Leu Leu Ile Ser Val Leu Gly Phe Phe Ile	245	250	255
Ser Lys Tyr Gly Leu Ser Ile Lys Ile Ile Tyr Phe Tyr Val Phe Phe	260	265	270
Ala Ser Ser Ile Leu Leu Val Ser Ile Val Phe Ser Lys Val Leu Ser	275	280	285
Lys Leu Met Lys Thr Tyr Gln Ile Lys Arg Phe Leu Val Phe Leu Asp	290	295	300
Pro Ala Ile Asp Ala Lys Gly Ala Gly Trp Asn Leu Asn Gln Val Lys	305	310	315
Ile Ala Ile Gly Ser Gly Gly Leu Leu Gly Lys Gly Phe Leu Lys Gly			

145 150 155 160
 Thr Ile Phe Ile Phe Ile Ser Phe Phe Ala Gly Ile Asp Leu His Tyr
 165 170 175
 Val Leu Ala Phe Ala Leu Ile Gly Phe Phe Ser Phe Val Phe Ala Ile
 180 185 190
 Leu Pro Val Trp Tyr Glu Tyr Lys Val Asn Met Gly Asn Val Phe Tyr
 195 200 205
 Leu Ile Phe Ser Asn Pro Phe Tyr Phe Arg Val Ile Met Gly Val Leu
 210 215 220
 Leu Leu Ile Leu Leu Ile Ser Val Leu Gly Phe Phe Ile Ser Lys Tyr
 225 230 235 240
 Gly Leu Ser Ile Lys Ile Ile Tyr Phe Tyr Val Phe Phe Ala Ser Ser
 245 250 255
 Ile Leu Leu Val Ser Ile Val Phe Ser Lys Val Leu Ser Lys Leu Met
 260 265 270
 Lys Thr Tyr Gln Ile Lys Arg Phe Leu Val Phe Leu Asp Pro Ala Ile
 275 280 285
 Asp Ala Lys Gly Ala Gly Trp Asn Leu Asn Gln Val Lys Ile Ala Ile
 290 295 300
 Gly Ser Gly Gly Leu Leu Gly Lys Gly Phe Leu Lys Gly Pro Tyr Thr
 305 310 315 320
 His Ala Asn Tyr Val Pro Ser Gln Ser Thr Asp Phe Ile Phe Ser Ile
 325 330 335
 Leu Ala Glu Glu Phe Gly Phe Leu Gly Val Ser Thr Ile Leu Ile Leu
 340 345 350
 Phe Phe Phe Leu Phe Phe Lys Phe Leu Ile Ile Met Asn Lys Ser Gln
 355 360 365
 Asp Arg Tyr Met Ala Leu Val Ile Ser Gly Ile Leu Gly Leu Leu Phe
 370 375 380
 Phe His Thr Ser Phe Asn Val Gly Met Ser Leu Gly Val Leu Pro Ile
 385 390 395 400
 Thr Gly Ile Pro Phe Pro Phe Leu Ser Tyr Gly Gly Ser Ser Thr Ile
 405 410 415
 Thr Phe Phe Leu Ala Met Ser Phe Tyr Phe Asn Ile Glu Ser Ile Val
 420 425 430
 Ala Met Asp
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<210> 35
 <211> 1365
 <212> DNA
 <213> Homo sapiens

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caaaccctttt gggtaattat tggattttttt ctaatttttta tagtgggcaa atatgatttta 240
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actgcattttt ttggaatgac agtaaatgga gcaagatcctt ggattggcat atggaaaactt 360
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actgaaaaaa aggggttataa tgaatttttt acctttatta ctgcattttt attaatttttt 480
ccatcggttaa ttcttatatt attgcaacct gatttttggtta cagcaatagt atatttaacc 540
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<210> 36
<211> 1308
<212> DNA
<213> Homo sapiens

<400> 36
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aaacaaacct tttgggtaat tattggattt tttctaattt ttatagtggg caaatatgat 180
ttaaaatttg tttatagcat ggtatatact ttatattttt tattaatatt ggctttaatt 240
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cttggaggac agccttctga atttggtaaa gttgttatta ttttaaccct ttcaaaattt 360
tacactgaaa aaaagggtta taatgaattt tttaccttta ttactgcatt tttattaatt 420
tttccatcgg taattcttat attattgcaa cctgattttg gtacagcaat agtatattta 480
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<210> 37
<211> 129
<212> PRT
<213> Homo sapiens

<400> 37
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Arg Ser Ser Asn Ser Pro Leu Tyr Phe Val Pro Asp Thr Lys Phe Glu
20 25 30
Thr Leu Ser Ile Arg Ile Val Leu Ser Cys Ser Leu Leu Leu Ile Phe
35 40 45
Phe Cys Thr Met Leu Asp Ala Arg Pro Ser Thr Ile Ala Val Phe Pro
50 55 60
Thr Pro Gly Ser Pro Ile Ser Ile Ala Leu Phe Leu Phe Leu Leu Lys
65 70 75 80
Ser Ile Phe Val Arg Val Leu Ile Ser Ala Ser Leu Pro Thr Lys Gly
85 90 95
Ser Asn Phe Leu Ala Phe Ala Ser Ala Val Lys Phe Leu Thr Tyr Phe
100 105 110
Pro Ile Ser Lys Cys Ser Phe Ser Ser Arg Ile Ser Ser Ser Asn Ser
115 120 125
Leu

<210> 38
<211> 108
<212> PRT
<213> Homo sapiens

<400> 38
Pro Leu Tyr Phe Val Pro Asp Thr Lys Phe Glu Thr Leu Ser Ile Arg
1 5 10 15
Ile Val Leu Ser Cys Ser Leu Leu Leu Ile Phe Phe Cys Thr Met Leu
20 25 30
Asp Ala Arg Pro Ser Thr Ile Ala Val Phe Pro Thr Pro Gly Ser Pro
35 40 45
Ile Ser Ile Ala Leu Phe Leu Phe Leu Leu Lys Ser Ile Phe Val Arg
50 55 60
Val Leu Ile Ser Ala Ser Leu Pro Thr Lys Gly Ser Asn Phe Leu Ala
65 70 75 80
Phe Ala Ser Ala Val Lys Phe Leu Thr Tyr Phe Pro Ile Ser Lys Cys
85 90 95
Ser Phe Ser Ser Arg Ile Ser Ser Ser Asn Ser Leu
100 105

<210> 39
<211> 390
<212> DNA
<213> Homo sapiens

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gcttttgcaa gtgctgttaa atttttgaca tactttccaa tttcaaagt ctcattttca 360
agtcgtattt cttcatcaaa ttctttgtag 390

<210> 40
<211> 327
<212> DNA
<213> Homo sapiens

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atatttgtaa gagttttaat ctctgcttct cttccaacca aggggtctaa ttttttggtc 240
tttgcaagtg ctgttaaatt tttgacatac tttccaattt caaagtgtct attttcaagt 300
cgtattttct catcaaattc tttgtag 327

<210> 41
<211> 107
<212> PRT
<213> Homo sapiens

<400> 41
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Arg Ile Leu Val Ile Val Leu Phe Leu Asn Ser Leu Leu Ser Leu Phe
20 25 30
Val Phe Leu Ala Gly Ser Tyr Asn Ile Phe Val Tyr Asn Phe Gln Lys
35 40 45
Phe Tyr Leu Asp Leu Ala Ile Ile Leu Ser Ser Val Ser Phe Gly Leu
50 55 60
Glu Ser Thr Arg Leu Ile Phe Phe Tyr Phe Leu Lys Asn Lys Lys Ile
65 70 75 80
Lys Tyr Tyr Leu Ile Leu Ile Phe Ser Phe Ile Ile Phe Phe Ile Ala
85 90 95
Leu Val Phe Lys Ile Phe Leu Ser Gly Asn Lys
100 105

<210> 42
<211> 69
<212> PRT
<213> Homo sapiens

<400> 42
Tyr Asn Ile Phe Val Tyr Asn Phe Gln Lys Phe Tyr Leu Asp Leu Ala
1 5 10 15
Ile Ile Leu Ser Ser Val Ser Phe Gly Leu Glu Ser Thr Arg Leu Ile
20 25 30

Phe Phe Tyr Phe Leu Lys Asn Lys Lys Ile Lys Tyr Tyr Leu Ile Leu
 35 40 45

Ile Phe Ser Phe Ile Ile Phe Phe Ile Ala Leu Val Phe Lys Ile Phe
 50 55 60

Leu Ser Gly Asn Lys
 65

<210> 43
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 43
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 atttttgttt acaattttca gaaattttat ctgatacttg ctattatttt aagctctgtt 180
 tcttttggac ttgaatctac tagactgata tttttttatt ttttgaaaaa taaaaaaatt 240
 aagtattatt taattttaat ttttagtttt ataatttttt ttattgctct tgtttttaaa 300
 atttttcttt ctggtataaa atag 324

<210> 44
 <211> 210
 <212> DNA
 <213> Homo sapiens

<400> 44
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 aaaattaagt attatttaat ttttaatttt agttttataa ttttttttat tgctcttggt 180
 tttaaaattt ttctttctgg taataaatag 210

<210> 45
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 45
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 1 5 10 15

Asn Leu Ser Thr Met His Lys Ile Asp Thr Lys Glu Asp Met Lys Ile
 20 25 30

Leu Tyr Ser Glu Ile Ala Glu Leu Arg Lys Lys Leu Asn Leu Asn His
 35 40 45

Leu Glu Ile Asp Asp Thr Leu Glu Lys Val Ala Lys Glu Tyr Ala Ile
 50 55 60

Lys Leu Gly Glu Asn Arg Thr Ile Thr His Thr Leu Phe Gly Thr Thr
 65 70 75 80

Pro Met Gln Arg Ile His Lys Tyr Asp Gln Ser Phe Asn Leu Thr Arg
 85 90 95

Glu Ile Leu Ala Ser Gly Ile Glu Leu Asn Arg Val Val Asn Ala Trp
 100 105 110

Leu Asn Ser Pro Ser His Lys Glu Ala Leu Ile Asn Thr Asp Thr Asp
 115 120 125

Lys Ile Gly Gly Tyr Arg Leu Lys Thr Thr Asp Asn Ile Asp Ile Phe
 130 135 140

Val Val Leu Phe Gly Lys Arg Lys Tyr Lys Asn
 145 150 155

<210> 46
 <211> 136
 <212> PRT
 <213> Homo sapiens

<400> 46
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 1 5 10 15

Glu Ile Ala Glu Leu Arg Lys Lys Leu Asn Leu Asn His Leu Glu Ile
 20 25 30

Asp Asp Thr Leu Glu Lys Val Ala Lys Glu Tyr Ala Ile Lys Leu Gly
 35 40 45

Glu Asn Arg Thr Ile Thr His Thr Leu Phe Gly Thr Thr Pro Met Gln
 50 55 60

Arg Ile His Lys Tyr Asp Gln Ser Phe Asn Leu Thr Arg Glu Ile Leu
 65 70 75 80

Ala Ser Gly Ile Glu Leu Asn Arg Val Val Asn Ala Trp Leu Asn Ser
 85 90 95

Pro Ser His Lys Glu Ala Leu Ile Asn Thr Asp Thr Asp Lys Ile Gly
 100 105 110

Gly Tyr Arg Leu Lys Thr Thr Asp Asn Ile Asp Ile Phe Val Val Leu
 115 120 125

Phe Gly Lys Arg Lys Tyr Lys Asn
 130 135

<210> 47
 <211> 468
 <212> DNA
 <213> Homo sapiens

<400> 47
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 atgcataaaa tagatacaaa agaagatatg aaaattctat attcagaaat tgctgaattg 120
 agaaaaaaat taaatctaaa ccatctagaa atagatgata cccttgaaaa agttgcaaaa 180
 gaatatgccca ttaaactggg agaaaataga acaataactc acaccctttt tggcacaacc 240
 ccaatgcaaa gaatacataa atacgatcaa tcctttaatt taacaagaga aatactggca 300
 tcaggaattg aacttaacag agtagttaat gcatggctta atagtccaag ccacaaagaa 360
 gctcttatta atacagatac cgataaaata ggtggctata gattaataaac gactgacaat 420
 atagatatat ttgtagttct ttttggaata agaaaatata agaattga 468

<210> 48
 <211> 411

<212> DNA
<213> Homo sapiens

<400> 48
acaatgcata aaatagatac aaaagaagat atgaaaattc tatattcaga aattgctgaa 60
ttgagaaaaa aattaaatct aaaccatcta gaaatagatg atacccttga aaaagttgca 120
aaagaatatg ccattaaact gggagaaaat agaacaataa ctcacaccct ttttggcaca 180
accccaatgc aaagaatata taaatacgat caatccttta atttaacaag agaaatactg 240
gcatcaggaa ttgaacttaa cagagtagtt aatgcatggc ttaatagtcc aagccacaaa 300
gaagctctta ttaatacaga taccgataaa ataggtggct atagattaaa aacgactgac 360
aatatagata tattttagtg tctttttgga aaaagaaaat ataagaattg a 411

<210> 49
<211> 633
<212> PRT
<213> Homo sapiens

<400> 49
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1 5 10 15
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20 25 30
Lys Leu Val Asp Gln Gln Phe Asn Leu Met Ile Asn Leu Ile Glu Ser
35 40 45
Ile Lys Ser Ser Phe Asn Leu Tyr Ile Ser Ser Met Glu Glu Lys Val
50 55 60
Arg Val Ser Ser Met Tyr Phe Asn Ser Ala Glu Lys Phe Asn Glu Ala
65 70 75 80
Ser Lys Ile Lys Ser Lys Arg Leu Ser Phe Ile Ser Asp Gln Ser Glu
85 90 95
Ile Leu Ile Gln Thr Gly Ser Asn Met Met Val Thr Asp Lys Glu Gly
100 105 110
Lys Ile Val Phe Thr Thr Ala Val Lys Asp Asn Ser Asp Phe Gly Lys
115 120 125
Ser Ile Gly Asp Arg Glu Tyr Phe Thr Lys Leu Lys Glu Ser Asn Ser
130 135 140
Ile Val Tyr Asn Ser Phe Val Met Leu Ala Asp Pro Gly Ser Ile Glu
145 150 155 160
Glu Ser Leu Leu Lys Asp Ile Ser Lys Ile Lys Asn Lys Lys Gly Gln
165 170 175
Ile Pro Tyr Ile Leu Ile Gly Met Pro Leu Arg Asp Phe Glu Thr Asp
180 185 190
Asn Ile Phe Gly Tyr Phe Met Phe Leu Tyr Ser Met Asp Tyr Ile Tyr
195 200 205
Arg Ser Phe Arg Gly Ile Asn Phe Gly Ile Leu Ser Ser Gly Arg Ala
210 215 220

Leu Ala Tyr Asp Thr Thr Gly Arg Leu Leu Val His His Val Val Leu
 225 230 235 240
 Pro Gly Asp Ile Leu Thr Asp Ile Ser Ala Ser Tyr Ser Asn Ile Ile
 245 250 255
 Lys Lys Thr Ser Glu Asp Leu Leu Gln Lys Asn Lys Glu Ile Ser Thr
 260 265 270
 Val Tyr Tyr Tyr Asp Pro Lys Ser Asn Lys Lys Tyr Val Gly Ile Ser
 275 280 285
 Gln Lys Val Leu Leu Asn Leu Ser Asn Asn Lys Phe Ile Leu Leu Met
 290 295 300
 Arg Thr Ser Glu Asp Asp Phe Tyr Tyr Met Ser Arg Ala Thr Thr Ile
 305 310 315 320
 Ile Leu Ala Ile Ser Phe Val Phe Thr Leu Leu Met Leu Ala Ile Ala
 325 330 335
 Thr Leu Tyr Leu Val Lys Lys Leu Ser Ser Ser Leu Asn Lys Ile Leu
 340 345 350
 Glu Tyr Ser Glu Arg Leu Ala Ser Gly Asn Phe Thr Ala Asp Ile Asn
 355 360 365
 Phe Gly Lys Trp Asp Thr Val Glu Leu Tyr Ser Leu Tyr Glu Gly Leu
 370 375 380
 Glu Gln Leu Arg Thr Asn Phe Ser Ser Val Ala Lys Gly Val Ile Glu
 385 390 395 400
 Asn Leu Asp Tyr Leu Tyr Glu Asn Ala Ile Gln Ile Ala Asn Ala Ser
 405 410 415
 Gln Asn Leu Ser Ser Gly Ala Val Glu Gln Ala Ser Thr Leu Glu Gln
 420 425 430
 Met Thr Ala Asn Ile Glu Gln Ile Ser Gln Gly Val Ser Glu Asn Thr
 435 440 445
 Glu Asn Ala Ala Thr Thr Glu Lys Ile Ala Val Asn Thr Asn Glu Arg
 450 455 460
 Thr Lys Glu Gly His Lys Ser Val Val Lys Ala Ile Glu Ala Met Thr
 465 470 475 480
 Val Ile Thr Glu Lys Ile Gly Ile Ile Asp Glu Ile Thr Arg Gln Thr
 485 490 495
 Asn Leu Leu Ala Leu Asn Ala Ser Ile Glu Ala Ala Arg Val Gly Glu
 500 505 510
 Lys Gly Lys Gly Phe Glu Val Val Ala Ala Glu Val Arg Lys Leu Ala
 515 520 525
 Asp Gln Ser Lys Glu Ser Ala Arg Glu Ile Ile Asp Ile Ala Asn Arg
 530 535 540

Ser Leu Thr Val Ala Ser Arg Ala Gly Glu Asn Phe Glu Gln Ile Val
545 550 555 560

Pro Gly Met Glu Gln Thr Ala Arg Leu Val Lys Asn Ile Ser Asn Glu
565 570 575

Ser Tyr Lys Gln Ser Val Gln Ile Glu Gln Phe Lys Asn Ala Ile Glu
580 585 590

Gln Val Ser Gln Leu Val Gln Thr Thr Ala Ser Ser Ser Glu Glu Leu
595 600 605

Ser Ala Met Ser Glu Lys Met Leu Glu Ser Val Lys Asp Leu Lys Glu
610 615 620

Ser Val Asp Tyr Phe Lys Ile Glu Lys
625 630

<210> 50

<211> 606

<212> PRT

<213> Homo sapiens

<400> 50

Met Leu Ile Asn Ser Lys Leu Val Asp Gln Gln Phe Asn Leu Met Ile
1 5 10 15

Asn Leu Ile Glu Ser Ile Lys Ser Ser Phe Asn Leu Tyr Ile Ser Ser
20 25 30

Met Glu Glu Lys Val Arg Val Ser Ser Met Tyr Phe Asn Ser Ala Glu
35 40 45

Lys Phe Asn Glu Ala Ser Lys Ile Lys Ser Lys Arg Leu Ser Phe Ile
50 55 60

Ser Asp Gln Ser Glu Ile Leu Ile Gln Thr Gly Ser Asn Met Met Val
65 70 75 80

Thr Asp Lys Glu Gly Lys Ile Val Phe Thr Thr Ala Val Lys Asp Asn
85 90 95

Ser Asp Phe Gly Lys Ser Ile Gly Asp Arg Glu Tyr Phe Thr Lys Leu
100 105 110

Lys Glu Ser Asn Ser Ile Val Tyr Asn Ser Phe Val Met Leu Ala Asp
115 120 125

Pro Gly Ser Ile Glu Glu Ser Leu Leu Lys Asp Ile Ser Lys Ile Lys
130 135 140

Asn Lys Lys Gly Gln Ile Pro Tyr Ile Leu Ile Gly Met Pro Leu Arg
145 150 155 160

Asp Phe Glu Thr Asp Asn Ile Phe Gly Tyr Phe Met Phe Leu Tyr Ser
165 170 175

Met Asp Tyr Ile Tyr Arg Ser Phe Arg Gly Ile Asn Phe Gly Ile Leu
180 185 190

Ser Ser Gly Arg Ala Leu Ala Tyr Asp Thr Thr Gly Arg Leu Leu Val
 195 200 205
 His His Val Val Leu Pro Gly Asp Ile Leu Thr Asp Ile Ser Ala Ser
 210 215 220
 Tyr Ser Asn Ile Ile Lys Lys Thr Ser Glu Asp Leu Leu Gln Lys Asn
 225 230 235 240
 Lys Glu Ile Ser Thr Val Tyr Tyr Tyr Asp Pro Lys Ser Asn Lys Lys
 245 250 255
 Tyr Val Gly Ile Ser Gln Lys Val Leu Leu Asn Leu Ser Asn Asn Lys
 260 265 270
 Phe Ile Leu Leu Met Arg Thr Ser Glu Asp Asp Phe Tyr Tyr Met Ser
 275 280 285
 Arg Ala Thr Thr Ile Ile Leu Ala Ile Ser Phe Val Phe Thr Leu Leu
 290 295 300
 Met Leu Ala Ile Ala Thr Leu Tyr Leu Val Lys Lys Leu Ser Ser Ser
 305 310 315 320
 Leu Asn Lys Ile Leu Glu Tyr Ser Glu Arg Leu Ala Ser Gly Asn Phe
 325 330 335
 Thr Ala Asp Ile Asn Phe Gly Lys Trp Asp Thr Val Glu Leu Tyr Ser
 340 345 350
 Leu Tyr Glu Gly Leu Glu Gln Leu Arg Thr Asn Phe Ser Ser Val Ala
 355 360 365
 Lys Gly Val Ile Glu Asn Leu Asp Tyr Leu Tyr Glu Asn Ala Ile Gln
 370 375 380
 Ile Ala Asn Ala Ser Gln Asn Leu Ser Ser Gly Ala Val Glu Gln Ala
 385 390 395 400
 Ser Thr Leu Glu Gln Met Thr Ala Asn Ile Glu Gln Ile Ser Gln Gly
 405 410 415
 Val Ser Glu Asn Thr Glu Asn Ala Ala Thr Thr Glu Lys Ile Ala Val
 420 425 430
 Asn Thr Asn Glu Arg Thr Lys Glu Gly His Lys Ser Val Val Lys Ala
 435 440 445
 Ile Glu Ala Met Thr Val Ile Thr Glu Lys Ile Gly Ile Ile Asp Glu
 450 455 460
 Ile Thr Arg Gln Thr Asn Leu Leu Ala Leu Asn Ala Ser Ile Glu Ala
 465 470 475 480
 Ala Arg Val Gly Glu Lys Gly Lys Gly Phe Glu Val Val Ala Ala Glu
 485 490 495
 Val Arg Lys Leu Ala Asp Gln Ser Lys Glu Ser Ala Arg Glu Ile Ile
 500 505 510

Asp Ile Ala Asn Arg Ser Leu Thr Val Ala Ser Arg Ala Gly Glu Asn
 515 520 525
 Phe Glu Gln Ile Val Pro Gly Met Glu Gln Thr Ala Arg Leu Val Lys
 530 535 540
 Asn Ile Ser Asn Glu Ser Tyr Lys Gln Ser Val Gln Ile Glu Gln Phe
 545 550 555 560
 Lys Asn Ala Ile Glu Gln Val Ser Gln Leu Val Gln Thr Thr Ala Ser
 565 570 575
 Ser Ser Glu Glu Leu Ser Ala Met Ser Glu Lys Met Leu Glu Ser Val
 580 585 590
 Lys Asp Leu Lys Glu Ser Val Asp Tyr Phe Lys Ile Glu Lys
 595 600 605

<210> 51
 <211> 1902
 <212> DNA
 <213> Homo sapiens

<400> 51
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 attttgtttt ttgcttttgg aatgcttatt aatagtaaat tgggtggatca acagttaa 120
 cttatgataa atcttattga aagcattaaa agttcctttta atctttacat ctcttcaatg 180
 gaagagaaaag ttagggtag ttccatgtat ttcaactctg ctgaaaaaatt taatgaggct 240
 agtaaaatta aatccaaaag gttgagcttt atttcagatc aatctgaaat tcttattcaa 300
 accggtagta atatgatggt tacagacaaa gaaggtaaaa tagtgtttac tacggcgggt 360
 aaggataata gtgattttgg caaatctatt ggggatagag aatattttac aaaacttaag 420
 gagtctaata gtattgttta caattccttt gtcattgttg cagatcccgg gtctattgag 480
 gagtctttac ttaaagatat ttccaagata aaaaataaaa aaggtcagat tccttacata 540
 ttaaataggta tgccattaag agattttgaa acagataaca tttttgggta ttttatgttt 600
 ctttattcaa tggattatat atataggtct ttttagaggga ttaattttgg aatactctct 660
 agcggtcgtg cgctagctta tgatactacg ggtagattgt tggttcatca tgtagtattg 720
 ccagggtgata ttttgactga tattagtgtt tcttattcca atattattaa gaaaacatct 780
 gaagatttgt tgcaaaaaga taaagaaatt tcaactgttt attattatga tcctaaaagc 840
 aataagaaat atgtgggaat tagtcaaaaag gtgttattaa acttgctctaa taataaattt 900
 attcctttta tgagaacttc agaggacgat ttttattaca tgtcacgagc tacaactata 960
 atcttagcaa ttagttttgt atttacatta cttatgcttg ctattgcaac tctttatctt 1020
 gtgaaaaagt taagctcttc tttgaataag atactggaat attctgagag acttgcttct 1080
 ggtaatttta ctgctgatat taattttggc aaatgggata ctgtagagct ttacagtttg 1140
 tacgaagggc ttgagcagtt gagaaccaat tttcttcag ttgcaaaagg agttattgaa 1200
 aatctagatt atctttatga aaatgcaatt caaatagcaa atgcaagcca gaatttaagt 1260
 tctggcgctg ttgagcaggc ttctacttta gagcaaatga cagcaaatat tgagcaaat 1320
 tcacaagggtg tttctgagaa tactgaaaat gcagctacta ctgaaaaaat tgctgtta 1380
 actaatgaaa ggactaaaga ggggcataaa tctgttggtta aggctattga ggcaatgact 1440
 gtaattactg aaaaaattgg aattattgat gagataacaa ggcaaacc aa tttgcttgct 1500
 ttaaattgcct cgattgaagc tgcacgagtg ggagaaaagg gcaagggatt tgaagtggta 1560
 gctgctgagg ttagaaagct tgcagatcaa agcaagaat cagcaagaga gattattgat 1620
 attgcaaca gaagttaac tgttgcaagt cgtgctgggg aaaattttga acaaatagtt 1680
 cctggtagtg acaaacagc cagacttgta aaaaatattt ctaatgaaag ttataagcaa 1740
 agtggtcaaa tagagcaatt taaaaatgca atagagcagg ttagtcagtt agtccaaact 1800
 acagcctcaa gcagtgaaga gctttctgca atgtctgaaa agatgttaga gtagtga 1860
 gatttaaaag aatctgttga ttattttaag atcgaaaagt aa 1902

<210> 52
 <211> 1821
 <212> DNA

<213> Homo sapiens

<400> 52

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agcattaaaa gttcttttaa tctttacatc tcttcaatgg aagagaaagt tagggtagt 120
tccatgtatt tcaactctgc tgaaaaatatt aatgaggcta gtaaaattaa atccaaaagg 180
ttgagcttta tttcagatca atctgaaatt cttattcaaa ccggtagtaa tatgatgggt 240
acagacaaag aaggtaaaat agtggttact acggcggtta aggataatag tgattttggc 300
aaatctattg gggatagaga atattttaca aaacttaagg agtctaatag tattgtttac 360
aattcctttg tcatgtttggc agatcccggg tctattgagg agtctttact taaagatatt 420
tccaagataa aaaataaaaa aggtcagatt ccttacatat taataggtat gccattaaga 480
gattttgaaa cagataacat ttttggttat tttatgtttc tttattcaat ggattatata 540
tataggtctt ttagagggat taattttgga atactctcta gcggtcgtgc gctagcttat 600
gatactacgg gtagattggt ggttcatcat gtagtattgc caggtgatat tttgactgat 660
attagtgcctt cttattccaa tattattaag aaaacatctg aagatttggt gcaaaagaat 720
aaagaaatct caactgttta ttattatgat cctaaaagca ataagaaata tgtgggaatt 780
agtcaaaagg tggtattaaa cttgtctaata aataaattta ttcttttaata gagaacttca 840
gaggacgatt tttattacat gtcacgagct acaactataa tcttagcaat tagttttgta 900
tttacattac ttatgcttgc tattgcaact ctttatcttg tgaaaaagtt aagctcttct 960
ttgaataaga tactggaata ttctgagaga cttgcttctg gtaattttac tgctgatatt 1020
aattttggca aatgggatac ttagagctt tacagtttgc acgaagggtc tgagcagttg 1080
agaaccaatt tttcttcagt tgcaaaagga gttattgaaa atctagatta tctttatgaa 1140
aatgcaattc aaatagcaaa tgcaagccag aatttaagtt ctggcgctgt tgagcaggtc 1200
tctactttag agcaaatgac agcaaatatt gagcaaatct cacaagggtg ttctgagaat 1260
actgaaaatg cagctactac tgaaaaaatt gctgttaata ctaatgaaag gactaaagag 1320
gggcataaat ctgttggtta ggctattgag gcaatgactg taattactga aaaaattgga 1380
attattgatg agataacaag gcaaaccaat ttgcttgctt taaatgcctc gattgaagct 1440
gcacgagtg gagaaaaggg caagggtatt gaagtggtag ctgctgaggt tagaaagctt 1500
gcagatcaaa gcaagaatc agcaagagag attattgata ttgcaaacag aagtttaact 1560
gttgcaagtc gtgctgggga aaattttgaa caaatagttc ctggtatgga acaaacagcc 1620
agacttgtaa aaaatatttc taatgaaagt tataagcaaa gtgttcaaat agagcaattt 1680
aaaaatgcaa tagagcaggt tagtcagtta gtccaaacta cagcctcaag cagtgaagag 1740
ctttctgcaa tgtctgaaaa gatgttagag agtgtaaaag atttaaaaga atctgttgat 1800
tattttaaga tcgaaaagta a 1821
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<210> 53

<211> 229

<212> PRT

<213> Homo sapiens

<400> 53

Met Arg Phe Ile Ile Ala Phe Leu Met Ile Leu Asn Gln Gly Phe Ser
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Asn Leu Phe Ser Leu Pro Pro Glu Asp Ile Ile Phe Glu Ser Ser Tyr
20 25 30

Glu Val Ala Ile Lys Lys Ala Gln Lys Leu Asn Lys Asn Val Leu Ile
35 40 45

Leu Val Gly Arg Asp Ile Lys Glu Asn Leu Ile Lys Asp Phe Leu Asn
50 55 60

Ser Phe Thr Asn Gly Glu Ile Ile His Lys Val Ser Arg Lys Ser Val
65 70 75 80

Phe Leu Val Ile Asp Lys Asp Asn Glu Ile Phe Asn Lys Ile Asn Leu
85 90 95

Gln Lys Ser Pro Thr Ile Phe Phe Val Asp Ser Lys Asn Glu Gln Ile

100	105	110
Lys Ala Ala Tyr Val Gly Ala Val	Leu Ser Ser Val Gln Phe Asp Lys	
115	120	125
Asp Phe Leu Asn Tyr Val Met Gly Ala Ile Lys Ser Thr Ser Val Leu		
130	135	140
Lys Lys Gln Lys Asp Tyr Glu Ile Asn Thr Ala Asp Glu Arg Thr Phe		
145	150	155
Phe Tyr Lys Thr Leu Lys Gly Asp Trp Arg Leu Lys Phe Asn Gly Lys		
165	170	175
Asp Arg Lys Leu Val Leu Phe Asp Thr Asp Leu Lys Glu Phe Leu Val		
180	185	190
Phe Lys Asp Ile Asn Glu Asn Lys Leu Tyr Ala Ile Pro Lys Ser Arg		
195	200	205
Ile Gly Asn Ile Tyr Phe Ser Leu Leu Gly Asn Glu Glu Trp Lys Leu		
210	215	220
Phe Gly Lys Ile Lys		
225		
<210> 54		
<211> 209		
<212> PRT		
<213> Homo sapiens		
<400> 54		
Leu Pro Pro Glu Asp Ile Ile Phe Glu Ser Ser Tyr Glu Val Ala Ile		
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Lys Lys Ala Gln Lys Leu Asn Lys Asn Val Leu Ile Leu Val Gly Arg		
20	25	30
Asp Ile Lys Glu Asn Leu Ile Lys Asp Phe Leu Asn Ser Phe Thr Asn		
35	40	45
Gly Glu Ile Ile His Lys Val Ser Arg Lys Ser Val Phe Leu Val Ile		
50	55	60
Asp Lys Asp Asn Glu Ile Phe Asn Lys Ile Asn Leu Gln Lys Ser Pro		
65	70	75
Thr Ile Phe Phe Val Asp Ser Lys Asn Glu Gln Ile Lys Ala Ala Tyr		
85	90	95
Val Gly Ala Val Leu Ser Ser Val Gln Phe Asp Lys Asp Phe Leu Asn		
100	105	110
Tyr Val Met Gly Ala Ile Lys Ser Thr Ser Val Leu Lys Lys Gln Lys		
115	120	125
Asp Tyr Glu Ile Asn Thr Ala Asp Glu Arg Thr Phe Phe Tyr Lys Thr		
130	135	140
Leu Lys Gly Asp Trp Arg Leu Lys Phe Asn Gly Lys Asp Arg Lys Leu		

145	150							155							160	
Val	Leu	Phe	Asp	Thr	Asp	Leu	Lys	Glu	Phe	Leu	Val	Phe	Lys	Asp	Ile	
				165					170					175		
Asn	Glu	Asn	Lys	Leu	Tyr	Ala	Ile	Pro	Lys	Ser	Arg	Ile	Gly	Asn	Ile	
			180					185					190			
Tyr	Phe	Ser	Leu	Leu	Gly	Asn	Glu	Glu	Trp	Lys	Leu	Phe	Gly	Lys	Ile	
		195					200					205				

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<210> 55
<211> 690
<212> DNA
<213> Homo sapiens
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<210> 56
<211> 630
<212> DNA
<213> Homo sapiens
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<210> 57
<211> 133
<212> PRT
<213> Homo sapiens
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Phe Leu Ile Phe Ile Val Ser Gly Ile Thr Tyr Phe Tyr Ser Thr Gln
 20 25 30
 Met Leu Glu Lys Ser Gln Lys Cys Val Glu Asp Asn Leu Asp Ala Lys
 35 40 45
 Val Lys Leu Val Asp Met Glu Asp Phe Tyr Phe Asp Leu Asn Glu Cys
 50 55 60
 Leu Asn Met Asp Asp Phe Phe Ile Pro Arg Pro Asp Phe Leu Asn Glu
 65 70 75 80
 Asn Leu Asn Lys Asn Leu Val Val Asp Gly Leu Ile Lys Asn Lys Phe
 85 90 95
 Leu Asp Glu Asn Phe Phe Lys Asp Leu Trp Ile Lys Lys Glu Asn Leu
 100 105 110
 Phe Asn Val Asp Ile Glu Lys Glu Asn Glu Lys Leu Ile Asp Lys Ile
 115 120 125
 Leu Glu Ile Ser Lys
 130

<210> 58
 <211> 103
 <212> PRT
 <213> Homo sapiens

<400> 58
 Thr Gln Met Leu Glu Lys Ser Gln Lys Cys Val Glu Asp Asn Leu Asp
 1 5 10 15
 Ala Lys Val Lys Leu Val Asp Met Glu Asp Phe Tyr Phe Asp Leu Asn
 20 25 30
 Glu Cys Leu Asn Met Asp Asp Phe Phe Ile Pro Arg Pro Asp Phe Leu
 35 40 45
 Asn Glu Asn Leu Asn Lys Asn Leu Val Val Asp Gly Leu Ile Lys Asn
 50 55 60
 Lys Phe Leu Asp Glu Asn Phe Phe Lys Asp Leu Trp Ile Lys Lys Glu
 65 70 75 80
 Asn Leu Phe Asn Val Asp Ile Glu Lys Glu Asn Glu Lys Leu Ile Asp
 85 90 95
 Lys Ile Leu Glu Ile Ser Lys
 100

<210> 59
 <211> 402
 <212> DNA
 <213> Homo sapiens

<400> 59
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 gttgaagaca atttagacgc taagggttaa ttagttgata tggaagattt ttattttgat 180

ttaaataaat gtctaaatat ggatgatttt tttattccaa gacctgattt tttaaatgaa 240
 aatttaaata agaatttagt tggtgatgga ttgattaaaa ataaatttct tgatgagaat 300
 tttttcaagg atctttggat taaaaaggaa aattttattta acgttgatat tgagaaggag 360
 aatgaaaaat taatagataa gatttttagaa atttccaaat ga 402

<210> 60
 <211> 312
 <212> DNA
 <213> Homo sapiens

<400> 60
 acacaaatgt tggaaaaatc tcaaaagtgt gttgaagaca atttagacgc taaggttaaa 60
 ttagttgata tggaagattt ttattttgat ttaaataaat gtctaaatat ggatgatttt 120
 tttattccaa gacctgattt tttaaatgaa aatttaaata agaatttagt tggtgatgga 180
 ttgattaaaa ataaatttct tgatgagaat tttttcaagg atctttggat taaaaaggaa 240
 aattttattta acgttgatat tgagaaggag aatgaaaaat taatagataa gatttttagaa 300
 atttccaaat ga 312

<210> 61
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 61
 Met Ile Arg Lys Tyr Leu Ile Tyr Ile Ser Leu Leu Phe Ile Val Phe
 1 5 10 15
 Glu Val Tyr Ser Lys Pro Ala Phe Ile Ser Gln Asp Asp Ser Tyr Glu
 20 25 30
 Leu Asp Phe Ser Ser Gly Glu Val Asp Ile Ser Val Asn Thr Asn Ser
 35 40 45
 Lys Phe Asn Leu Ser Phe Lys Asp Glu Ser Trp Ile Tyr Ile Lys Ser
 50 55 60
 Ile Glu Asn Glu Ala Phe Ile Lys Leu Ile Gly Glu Ser Tyr Asp Asn
 65 70 75 80
 Gly Ala Val Phe Thr Phe Gln Thr Phe Lys Lys Glu Gly Lys Ile Lys
 85 90 95
 Leu Val Phe Thr Tyr Gln Asn Val Lys Asp Ser Ser Glu Phe Asn Lys
 100 105 110
 Ile Ile Ile Leu Lys Ile Thr Lys Asn Phe Glu Val Ala Ile Pro Gln
 115 120 125
 Gly Val Gly Gly Gly Ser Ser Arg Asp Asn Asn Ile Glu Thr Gly Asn
 130 135 140
 Asn Leu Glu Leu Gly Gly Gly Ser Ile Ser Gly Ala Thr Ser Lys Glu
 145 150 155 160
 Ile Ile Val Arg Ala Leu Asn Leu Ser Tyr Ile Asn Asp Tyr Lys Gly
 165 170 175
 Ala Ile Asp Leu Leu Asn Lys Tyr Asn Phe Asn Asp Asp Lys Tyr Ile
 180 185 190

Leu Leu Lys Ala Glu Ile His Tyr Lys Asn Gly Asp Tyr Leu Lys Ser
 195 200 205
 Tyr Glu Asn Tyr Leu Lys Leu Lys Ser Lys Tyr Phe Gln Ser Ile Val
 210 215 220
 Phe Asp Leu Ile Arg Leu Ala Ile Glu Leu Asn Ile Lys Glu Glu Val
 225 230 235 240
 Leu Glu Asn Ala Arg Tyr Leu Val Glu Lys Asn Val Asp Phe Ser Glu
 245 250 255
 Ser Ile Tyr Leu Glu Ile Phe Glu Phe Leu Val Thr Arg Gly Glu His
 260 265 270
 Glu Phe Ala Leu Asn Phe Ser Ser Leu Tyr Phe Pro Lys Tyr Ile Asn
 275 280 285
 Ser Ser Phe Ser Asp Lys Tyr Ser Tyr Leu Leu Gly Lys Leu Tyr Glu
 290 295 300
 Ser Glu Ser Lys His Lys Asp Phe Leu Lys Ala Leu His Tyr Tyr Lys
 305 310 315 320
 Leu Val Ile Asp Asn Tyr Pro Phe Ser Tyr Tyr Tyr Glu Arg Ala Lys
 325 330 335
 Ile Arg Tyr Leu Phe Leu Lys Arg Phe Phe
 340 345
 <210> 62
 <211> 326
 <212> PRT
 <213> Homo sapiens
 <400> 62
 Lys Pro Ala Phe Ile Ser Gln Asp Asp Ser Tyr Glu Leu Asp Phe Ser
 1 5 10 15
 Ser Gly Glu Val Asp Ile Ser Val Asn Thr Asn Ser Lys Phe Asn Leu
 20 25 30
 Ser Phe Lys Asp Glu Ser Trp Ile Tyr Ile Lys Ser Ile Glu Asn Glu
 35 40 45
 Ala Phe Ile Lys Leu Ile Gly Glu Ser Tyr Asp Asn Gly Ala Val Phe
 50 55 60
 Thr Phe Gln Thr Phe Lys Lys Glu Gly Lys Ile Lys Leu Val Phe Thr
 65 70 75 80
 Tyr Gln Asn Val Lys Asp Ser Ser Glu Phe Asn Lys Ile Ile Ile Leu
 85 90 95
 Lys Ile Thr Lys Asn Phe Glu Val Ala Ile Pro Gln Gly Val Gly Gly
 100 105 110
 Gly Ser Ser Arg Asp Asn Asn Ile Glu Thr Gly Asn Asn Leu Glu Leu
 115 120 125

Gly Gly Gly Ser Ile Ser Gly Ala Thr Ser Lys Glu Ile Ile Val Arg
 130 135 140
 Ala Leu Asn Leu Ser Tyr Ile Asn Asp Tyr Lys Gly Ala Ile Asp Leu
 145 150 155 160
 Leu Asn Lys Tyr Asn Phe Asn Asp Asp Lys Tyr Ile Leu Leu Lys Ala
 165 170 175
 Glu Ile His Tyr Lys Asn Gly Asp Tyr Leu Lys Ser Tyr Glu Asn Tyr
 180 185 190
 Leu Lys Leu Lys Ser Lys Tyr Phe Gln Ser Ile Val Phe Asp Leu Ile
 195 200 205
 Arg Leu Ala Ile Glu Leu Asn Ile Lys Glu Glu Val Leu Glu Asn Ala
 210 215 220
 Arg Tyr Leu Val Glu Lys Asn Val Asp Phe Ser Glu Ser Ile Tyr Leu
 225 230 235 240
 Glu Ile Phe Glu Phe Leu Val Thr Arg Gly Glu His Glu Phe Ala Leu
 245 250 255
 Asn Phe Ser Ser Leu Tyr Phe Pro Lys Tyr Ile Asn Ser Ser Phe Ser
 260 265 270
 Asp Lys Tyr Ser Tyr Leu Leu Gly Lys Leu Tyr Glu Ser Glu Ser Lys
 275 280 285
 His Lys Asp Phe Leu Lys Ala Leu His Tyr Tyr Lys Leu Val Ile Asp
 290 295 300
 Asn Tyr Pro Phe Ser Tyr Tyr Tyr Glu Arg Ala Lys Ile Arg Tyr Leu
 305 310 315 320
 Phe Leu Lys Arg Phe Phe
 325

<210> 63

<211> 1041

<212> DNA

<213> Homo sapiens

<400> 63

atgattagaa aatatttgat ttatataagt ttgctattta ttgtttttga agtttactct 60
 aagccagctt ttataagtca agacgattcg tatgagcttg atttttagtag tggagaggta 120
 gatattagtg taaataccaa ttcaaaattt aatcttttct tttaaagatga gtcttggatt 180
 tatatcaaaa gcattgaaaa tgaagctttt attaagttaa ttggagaatc ttatgataac 240
 ggtgctgttt ttacttttca gactttttaa aaagaaggca aaattaaatt ggttttcact 300
 tatcaaaatg ttaaagattc aagtgaattt aataaaataa ttatcttgaa aattacaaag 360
 aattttgaag ttgcaattcc acaaggcggt ggtggtggct ctagcaggga caataacatt 420
 gaaactggta ataacttga acttgggggg gggagtatta gcggggcaac ttctaaagag 480
 attattgtta gggcttttaa tttgtcctac ataaatgatt acaaaggagc aatagatttg 540
 cttaataagt ataatttcaa tgacgataaa tatattttat tgaaggcgga aattcattat 600
 aaaaatggtg attattttaa atcttatgaa aattatttga aattgaagag taaatatttt 660
 caaagcattg tttttgatct aattaggctt gctatagaat taaatattaa agaagagggt 720
 ttagagaacg ctagatattt agttgaaaag aatgttgatt tttctgagag catttatctt 780
 gagatctttg aattcttagt aacaagggga gagcatgagt ttgcttttaa ttttagctct 840
 ctttactttc ctaagtatat taattcaagc ttttcagaca aatatagtta tttgttggga 900

aaactttatg agtctgagag caagcataaa gatttttttaa aggctttgca ttactataaa 960
 ttggttattg ataattaccc ttttagttat tattatgaga gagccaagat aagatattta 1020
 tttttaaaagc ggttttttta g 1041

<210> 64
 <211> 981
 <212> DNA
 <213> Homo sapiens

<400> 64
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 gatatttagtg taaataccaa ttcaaaattt aatctttctt ttaaagatga gtcttggatt 120
 tatatcaaaa gcattgaaaa tgaagctttt attaagttaa ttggagaatc ttatgataac 180
 ggtgctgttt ttactttttca gactttttaa aaagaaggca aaattaaatt ggttttcact 240
 tatcaaaatg ttaaagattc aagtgaattt aataaaataa ttatcttgaa aattacaaag 300
 aattttgaag ttgcaattcc acaaggcgtt ggtggtggct ctagcaggga caataacatt 360
 gaaactggta ataactctga acttgggggg gggagtatta gcggggcaac ttctaaagag 420
 attattgtta gggcttttaa tttgtcctac ataaatgatt acaaaggagc aatagatttg 480
 cttaataagt ataatttcaa tgacgataaa tatattttat tgaaggcgga aattcattat 540
 aaaaatggtg attattttaa atcttatgaa aattatttga aattgaagag taaatatttt 600
 caaagcattg tttttgatct aattaggctt gctatagaat taaatattaa agaagagggt 660
 ttagagaacg ctagatattt agttgaaaag aatggttgatt tttctgagag catttatctt 720
 gagatctttg aattcttagt aacaagggga gagcatgagt ttgcttttaa ttttagctct 780
 ctttactttc ctaagtatat taattcaagc ttttcagaca aatatagtta tttgttggga 840
 aaactttatg agtctgagag caagcataaa gattttttta aggctttgca ttactataaa 900
 ttggttattg ataattaccc ttttagttat tattatgaga gagccaagat aagatattta 960
 tttttaaaagc ggttttttta g 981

<210> 65
 <211> 505
 <212> PRT
 <213> Homo sapiens

<400> 65
 Met Thr Lys Val Leu Val Val Ser Ala Ile Ala Leu Leu Ser Lys Asp
 1 5 10 15
 Lys Glu Leu Ile Pro Phe Tyr Lys Phe Leu Phe Leu Phe Phe Phe
 20 25 30
 Thr Leu Leu Ala Cys Ser Lys Val Ser Lys Asp Phe Ile Val Phe Asn
 35 40 45
 Lys Asp Val Lys Thr Ser Ser Arg Ile Asp Asn Pro Asn Ser Asn Val
 50 55 60
 Leu Glu Val Asn Lys Met Glu Asp Phe Phe Gly Asp Ile Ile Asp Leu
 65 70 75 80
 Lys Gly Tyr Lys Ile Leu Ser Val Gln Gln Glu Asn Leu Asn Leu Asp
 85 90 95
 Val Tyr Phe Glu Gln Val Val Leu Ala Gln Asn Phe Ser Asn Leu Asn
 100 105 110
 Ala Tyr Leu Phe Ile Ile Gly Phe Asp Pro Lys Ile Lys Ala Gly Thr
 115 120 125
 Ile Leu Phe Lys Thr Gln Ile Asp Ile Asp Pro Lys Asn Ser Tyr Asn
 130 135 140

Met Tyr Leu Glu Asp Ile Thr Gly Asp Tyr Asp Phe Asn Ile Val Ile
 145 150 155 160
 Gln Gly Phe Leu Lys Asp Lys Ser Val Leu Tyr Val Phe Gln Lys Ser
 165 170 175
 Val Leu Asn Asp Val Ser Ser Tyr Arg Pro Ile Phe Phe Asp Lys Val
 180 185 190
 Asn Gly Thr Val Leu Ile Asn Lys Tyr Ala Arg Ser Ser Ala Tyr Glu
 195 200 205
 Glu Asn Arg Ser Arg Glu Ser Tyr Pro Ile Ser Leu Glu Lys Tyr Glu
 210 215 220
 Lys Val Gly Glu Asp Leu Ile Ile Ser Lys Ile Glu Lys Tyr Glu Tyr
 225 230 235 240
 Ser Asn Val Gln Gly Arg Tyr Cys Leu Ser Ser Val Ser Glu Lys Val
 245 250 255
 Gly Lys Ile Asp Asn Asn Ile Tyr Lys Thr Leu Lys Asn Leu Ser Lys
 260 265 270
 Asp Glu Val Tyr Lys Phe Leu His Gly Val Trp Tyr Asp Val His Asp
 275 280 285
 Tyr Asn Lys Met His Val Lys Asp Ile Asp Glu Val Leu Phe Leu Ser
 290 295 300
 Phe Glu Arg Gln Ser Ser Glu Ile Asn Leu Phe Arg Lys Asn Ser Gln
 305 310 315 320
 Glu Val Ala Lys Ile Glu Tyr Ile Ser Lys Pro Ala Tyr Asn Thr Leu
 325 330 335
 Asn Val Ser Ala Lys Ser Leu Phe Ser Asp Leu Ile Val Tyr Asn Phe
 340 345 350
 Trp Ile Lys Ile Val Asp Lys Glu Asn Ile Glu Ile Lys Ile Asp Thr
 355 360 365
 Ser Thr Asn Ser Tyr Asp Asn Ser Gly Phe Ser Gly Thr Phe Lys Arg
 370 375 380
 Phe Asp Glu Asn Val Leu Asn Val Lys Lys Gly Ser Ser Asp Ile Tyr
 385 390 395 400
 Phe Ile Pro Ser Gly Asn Tyr Val Tyr Lys Asp Lys Ile Tyr Asp Phe
 405 410 415
 Ser Tyr Pro His Leu Thr Tyr Ile Asp Glu Asn Lys Ile Tyr Tyr Gly
 420 425 430
 Ile Phe Asn Ile Phe Pro Leu Lys Asn Asn Phe Val Leu Glu Tyr Glu
 435 440 445
 Ile Asp Met Gly Ser Tyr Lys Leu Val Glu Ser Phe Phe Leu Glu His
 450 455 460

Ser Glu Arg Ile Val Gln Lys Gln Lys Phe Ser Thr Ile Ile Leu Asn
 465 470 475 480

Pro Ile Lys Ile Leu Lys Asp Asp Val Ser Leu Val Lys Gly Gln Lys
 485 490 495

Leu Lys Leu Glu Arg Ile Glu Lys Ile
 500 505

<210> 66

<211> 491

<212> PRT

<213> Homo sapiens

<400> 66

Lys Asp Lys Glu Leu Ile Pro Phe Tyr Lys Phe Leu Phe Leu Phe Phe
 1 5 10 15

Phe Phe Thr Leu Leu Ala Cys Ser Lys Val Ser Lys Asp Phe Ile Val
 20 25 30

Phe Asn Lys Asp Val Lys Thr Ser Ser Arg Ile Asp Asn Pro Asn Ser
 35 40 45

Asn Val Leu Glu Val Asn Lys Met Glu Asp Phe Phe Gly Asp Ile Ile
 50 55 60

Asp Leu Lys Gly Tyr Lys Ile Leu Ser Val Gln Gln Glu Asn Leu Asn
 65 70 75 80

Leu Asp Val Tyr Phe Glu Gln Val Val Leu Ala Gln Asn Phe Ser Asn
 85 90 95

Leu Asn Ala Tyr Leu Phe Ile Ile Gly Phe Asp Pro Lys Ile Lys Ala
 100 105 110

Gly Thr Ile Leu Phe Lys Thr Gln Ile Asp Ile Asp Pro Lys Asn Ser
 115 120 125

Tyr Asn Met Tyr Leu Glu Asp Ile Thr Gly Asp Tyr Asp Phe Asn Ile
 130 135 140

Val Ile Gln Gly Phe Leu Lys Asp Lys Ser Val Leu Tyr Val Phe Gln
 145 150 155 160

Lys Ser Val Leu Asn Asp Val Ser Ser Tyr Arg Pro Ile Phe Phe Asp
 165 170 175

Lys Val Asn Gly Thr Val Leu Ile Asn Lys Tyr Ala Arg Ser Ser Ala
 180 185 190

Tyr Glu Glu Asn Arg Ser Arg Glu Ser Tyr Pro Ile Ser Leu Glu Lys
 195 200 205

Tyr Glu Lys Val Gly Glu Asp Leu Ile Ile Ser Lys Ile Glu Lys Tyr
 210 215 220

Glu Tyr Ser Asn Val Gln Gly Arg Tyr Cys Leu Ser Ser Val Ser Glu
 225 230 235 240

Lys Val Gly Lys Ile Asp Asn Asn Ile Tyr Lys Thr Leu Lys Asn Leu
 245 250 255
 Ser Lys Asp Glu Val Tyr Lys Phe Leu His Gly Val Trp Tyr Asp Val
 260 265 270
 His Asp Tyr Asn Lys Met His Val Lys Asp Ile Asp Glu Val Leu Phe
 275 280 285
 Leu Ser Phe Glu Arg Gln Ser Ser Glu Ile Asn Leu Phe Arg Lys Asn
 290 295 300
 Ser Gln Glu Val Ala Lys Ile Glu Tyr Ile Ser Lys Pro Ala Tyr Asn
 305 310 315 320
 Thr Leu Asn Val Ser Ala Lys Ser Leu Phe Ser Asp Leu Ile Val Tyr
 325 330 335
 Asn Phe Trp Ile Lys Ile Val Asp Lys Glu Asn Ile Glu Ile Lys Ile
 340 345 350
 Asp Thr Ser Thr Asn Ser Tyr Asp Asn Ser Gly Phe Ser Gly Thr Phe
 355 360 365
 Lys Arg Phe Asp Glu Asn Val Leu Asn Val Lys Lys Gly Ser Ser Asp
 370 375 380
 Ile Tyr Phe Ile Pro Ser Gly Asn Tyr Val Tyr Lys Asp Lys Ile Tyr
 385 390 395 400
 Asp Phe Ser Tyr Pro His Leu Thr Tyr Ile Asp Glu Asn Lys Ile Tyr
 405 410 415
 Tyr Gly Ile Phe Asn Ile Phe Pro Leu Lys Asn Asn Phe Val Leu Glu
 420 425 430
 Tyr Glu Ile Asp Met Gly Ser Tyr Lys Leu Val Glu Ser Phe Phe Leu
 435 440 445
 Glu His Ser Glu Arg Ile Val Gln Lys Gln Lys Phe Ser Thr Ile Ile
 450 455 460
 Leu Asn Pro Ile Lys Ile Leu Lys Asp Asp Val Ser Leu Val Lys Gly
 465 470 475 480
 Gln Lys Leu Lys Leu Glu Arg Ile Glu Lys Ile
 485 490

<210> 67
 <211> 1518
 <212> DNA
 <213> Homo sapiens

<400> 67
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 ccattttata aatttttgtt tttattcttt ttttttacat tacttgcttg ttccaaggta 120
 agcaaagatt ttattgtttt taacaaagat gtaaagactt cttccaggat cgataatcca 180
 aattccaatg ttttagaagt taataaaatg gaagattttt ttggagatat tatagattta 240
 aaaggttata aaattctttc agttcagcag gaaaatttaa atttagatgt gtattttgag 300

cagggtggttt	tagctcaaaa	tttttcaaat	cttaatgcat	atttggtttat	tattgggtttt	360
gatcctaata	ttaaagctgg	aacgattcct	tttaaaactc	aaatagatat	tgatccaaaa	420
aattccttata	acatgtatct	tgaagatatt	acagggtgatt	atgatttttaa	tatagttatt	480
caaggattttt	taaaagataa	atctgttttg	tatgtttttc	aaaaatctgt	tttaaatgat	540
gtgtcttctt	ataggcctat	attttttgac	aaagttaatg	gaactgttct	tattaataag	600
tatgcaagat	cttcagctta	tgaagaaaac	agatcaagag	aaagctatcc	tatttcttta	660
gaaaaatatg	aaaaagtggg	ggaagattta	ataattagca	agattgaaaa	atatgaatat	720
tctaattgttc	agggtagata	ttgtctttct	tctgtgagcg	aaaaagttgg	taaaattgat	780
aataatattt	ataaaacttt	aaagaattta	agcaaagatg	aagtttataa	atttttgcat	840
ggagtttggg	atgatgttca	tgactataat	aaaatgcatg	tcaaagatat	tgatgaagtt	900
ttattcttgt	cttttgaaag	gcaatcaagc	gagattaatc	ttttcaggaa	aaattctcaa	960
gaagttgcaa	agattgaata	tatttcaaaa	cctgtcttaca	atactcttaa	tgtagtgca	1020
aagtctcttt	tttcagattt	gatagtttat	aacttttgga	tcaaaattgt	agataaagaa	1080
aacattgaaa	tcaaaattga	cactagcaca	aattcttatg	ataatagtgg	attttcgggt	1140
acattttaaga	ggtttgatga	gaatgtctta	aatgttaaaa	aagggagtag	tgatatttat	1200
tttattccta	gtggaaatta	cgtgtataag	gataaaaatt	atgatttttc	ttacccccat	1260
ttactttata	ttgatgagaa	taaaatttat	tatggcattt	ttaatatttt	tcctttaaaa	1320
aataattttg	ttcttgaata	tgagattgac	atgggtagtt	acaagcttgt	tgaatctttt	1380
ttccttgagc	atagcgaaag	aattgttcaa	aagcaaaaat	tttctacaat	catttttaaat	1440
cctattaaaa	ttttaaaaga	tgatgtaagc	ttagttaaag	ggcaaaaatt	aaagcttgag	1500
cgaatagaaa	aaatatga					1518

<210> 68

<211> 1476

<212> DNA

<213> Homo sapiens

<400> 68

aaggataaag	aattaatccc	attttataaa	tttttgtttt	tattcttttt	ttttacatta	60
cttgcttggt	ccaaggtaag	caaagatttt	attgttttta	acaaagatgt	aaagacttct	120
tccaggatcg	ataatccaaa	ttccaatggt	ttagaagtta	ataaaatgga	agattttttt	180
ggagatatta	tagattttaa	aggttataaa	attcctttcag	ttcagcagga	aaattttaaat	240
ttagatgtgt	attttgagca	gggtggtttta	gctcaaaatt	tttcaaactc	taatgcatat	300
ttgtttatta	ttgggtttga	tcctaaaaatt	aaagctggaa	cgattctttt	taaaactcaa	360
atagatatgt	atccaaaaaa	ttcttataac	atgtatcttg	aagatattac	aggtgattat	420
gattttaata	tagttattca	aggattttta	aaagataaat	ctgttttgta	tgtttttcaa	480
aaatctggtt	taaatgatgt	gtcttcttat	aggcctatat	tttttgacaa	agttaatgga	540
actgttctta	ttaataagta	tgcaagatct	tcagcttatg	aagaaaacag	atcaagagaa	600
agctatccta	tttctttaga	aaaatatgaa	aaagtggggg	aagattttaat	aattagcaag	660
attgaaaaat	atgaatatct	taatgttcag	ggtagatatt	gtctttcttc	tgtgagcgaa	720
aaagttggta	aaattgataa	taatatttat	aaaactttta	agaattttaag	caaagatgaa	780
gtttataaat	ttttgcatgg	agtttggtat	gatgttcatg	actataataa	aatgcatgtc	840
aaagatatgt	atgaagtttt	attcttgtct	tttgaaaggc	aatcaagcga	gattaatctt	900
ttcaggaaaa	attctcaaga	agttgcaaag	attgaatata	tttcaaaacc	tgcttacaat	960
actcttaatg	ttagtgcata	gtctcttttt	tcagatttga	tagttttata	cttttggtatc	1020
aaaattgtag	ataaagaaaa	cattgaaatc	aaaattgaca	ctagcacaaa	ttcttatgat	1080
aatagtggat	tttcgggtac	atttaagagg	tttgatgaga	atgtctttaa	tgttaaaaaa	1140
gggagtagtg	atattttatt	tattcctagt	ggaaattacg	tgtataagga	taaaatttat	1200
gatttttctt	acccccattt	aacttatatt	gatgagaata	aaatttatta	tggcattttt	1260
aatatttttc	ctttaaaaaa	taattttgtt	cttgaaatat	agattgacat	gggtagttac	1320
aagcttggtg	aatctttttt	ccttgagcat	agcgaaagaa	ttgttcaaaa	gcaaaaattt	1380
tctacaatca	ttttaaatcc	tattaaaatt	ttaaaagatg	atgtaagctt	agttaaaggg	1440
caaaaattaa	agcttgagcg	aatagaaaaa	atatga			1476

<210> 69

<211> 179

<212> PRT

<213> Homo sapiens

<400> 69

Met Asn Lys Leu Leu Ile Phe Val Leu Ala Thr Phe Cys Val Phe Ser
 1 5 10 15
 Ser Phe Ala Gln Ala Asn Asp Ser Lys Asn Gly Ala Phe Gly Met Ser
 20 25 30
 Ala Gly Glu Lys Leu Leu Val Tyr Glu Thr Ser Lys Gln Asp Pro Ile
 35 40 45
 Val Pro Phe Leu Leu Asn Leu Phe Leu Gly Phe Gly Ile Gly Ser Phe
 50 55 60
 Ala Gln Gly Asp Ile Leu Gly Gly Ser Leu Ile Leu Gly Phe Asp Ala
 65 70 75 80
 Val Gly Ile Gly Leu Ile Leu Ala Gly Ala Tyr Leu Asp Ile Lys Ala
 85 90 95
 Leu Asp Gly Ile Thr Lys Lys Ala Ala Phe Gln Trp Thr Trp Gly Lys
 100 105 110
 Gly Val Met Leu Ala Gly Val Val Thr Met Ala Val Thr Arg Leu Thr
 115 120 125
 Glu Ile Ile Leu Pro Phe Thr Phe Ala Asn Ser Tyr Asn Arg Lys Leu
 130 135 140
 Lys Asn Ser Leu Asn Val Ala Leu Gly Gly Phe Glu Pro Ser Phe Asp
 145 150 155 160
 Val Ala Met Gly Gln Ser Ser Ala Leu Gly Phe Glu Leu Ser Phe Lys
 165 170 175
 Lys Ser Tyr

<210> 70
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 70
 Asn Asp Ser Lys Asn Gly Ala Phe Gly Met Ser Ala Gly Glu Lys Leu
 1 5 10 15
 Leu Val Tyr Glu Thr Ser Lys Gln Asp Pro Ile Val Pro Phe Leu Leu
 20 25 30
 Asn Leu Phe Leu Gly Phe Gly Ile Gly Ser Phe Ala Gln Gly Asp Ile
 35 40 45
 Leu Gly Gly Ser Leu Ile Leu Gly Phe Asp Ala Val Gly Ile Gly Leu
 50 55 60
 Ile Leu Ala Gly Ala Tyr Leu Asp Ile Lys Ala Leu Asp Gly Ile Thr
 65 70 75 80
 Lys Lys Ala Ala Phe Gln Trp Thr Trp Gly Lys Gly Val Met Leu Ala
 85 90 95

Gly Val Val Thr Met Ala Val Thr Arg Leu Thr Glu Ile Ile Leu Pro
100 105 110

Phe Thr Phe Ala Asn Ser Tyr Asn Arg Lys Leu Lys Asn Ser Leu Asn
115 120 125

Val Ala Leu Gly Gly Phe Glu Pro Ser Phe Asp Val Ala Met Gly Gln
130 135 140

Ser Ser Ala Leu Gly Phe Glu Leu Ser Phe Lys Lys Ser Tyr
145 150 155

<210> 71
<211> 540
<212> DNA
<213> Homo sapiens

<400> 71
atgaataaac ttttaatttt tgttttggca accttttgtg ttttttctag ctttgcctcaa 60
gctaattgatt ctaaaaatgg tgcgtttggg atgagtgtctg gagaaaaact tttggtttat 120
gaaactagca agcaagatcc tattgtacca tttttattga accttttttt aggggttggga 180
ataggctcct ttgctcaagg agatattcct ggaggttctc ttattcttgg atttgatgcg 240
gttggtatag ggcttatact tgcgggggct tatttggata tcaaagcgct tgatgggtatt 300
actaaaaaag ctgctttttca atggacttgg ggtaagggag ttatgttagc aggtgtgggt 360
actatggctg tgacaagatt aacagaaatt attcttccat ttacatttgc taatagttat 420
aataggaagc taaaaaatag ccttaatgta gctttaggag gatttgaacc tagttttgat 480
gttgcaatgg gccaatccag tgctcttggg tttgaactgt ctttcaaaaa aagctattaa 540

<210> 72
<211> 477
<212> DNA
<213> Homo sapiens

<400> 72
aatgattcta aaaatggtgc gtttgggatg agtgctggag aaaaactttt ggtttatgaa 60
actagcaagc aagatcctat tgtaccattt ttattgaacc tttttttagg gtttgggaata 120
ggctcctttg ctcaaggaga tattcttggg gggtctctta ttcttggatt tgatgcgggt 180
ggtatagggc ttatacttgc gggggcttat ttggatatca aagcgcttga tgggtattact 240
aaaaaagctg cttttcaatg gacttggggt aagggagtta tgtagcagg tgtgggttact 300
atggctgtga caagattaac agaaattatt cttccattta catttgctaa tagttataat 360
aggaagctaa aaaatagcct taatgtagct ttaggaggat ttgaacctag ttttgatggt 420
gcaatgggccc aatccagtgc tcttgggttt gaactgtctt tcaaaaaaag ctattaa 477

<210> 73
<211> 212
<212> PRT
<213> Homo sapiens

<400> 73
Met Arg Lys Tyr Ile Phe Ile Ile Leu Ile Ala Val Leu Leu Ile Gly
1 5 10 15

Val Asn Ile Lys Lys Ile Ala Ala Ala Asn Ile Asp Arg His Thr
20 25 30

Asn Ser Thr Leu Gly Ile Asp Leu Ser Val Gly Ile Pro Ile Phe Tyr
35 40 45

Asn Asp Leu Ser Lys Ala Tyr Pro Thr Asn Leu Tyr Pro Gly Gly Ile
50 55 60

Gly Ala Ile Lys Tyr Gln Tyr His Ile Leu Asn Asn Leu Ala Ile Gly
 65 70 75 80
 Leu Glu Leu Arg Tyr Met Phe Asn Phe Asp Ile Asn His Ser Phe Asn
 85 90 95
 Ile Leu Asn Pro Asp Ser Ser Val Gly Lys Ile Phe Tyr Ser Val Pro
 100 105 110
 Ile Thr Phe Ser Ile Asn Tyr Ile Phe Asp Ile Gly Glu Leu Phe Gln
 115 120 125
 Ile Pro Val Phe Thr Asn Ile Gly Phe Ser Leu Asn Thr Tyr Gly Asp
 130 135 140
 Arg Asn Asn Asn Ile Thr Asn Leu Arg Thr Phe Asp Ala Leu Pro Thr
 145 150 155 160
 Ile Ser Phe Gly Ser Gly Ile Leu Trp Asn Phe Asn Tyr Lys Trp Ala
 165 170 175
 Phe Gly Ala Thr Ala Ser Trp Trp Met Met Phe Glu Phe Gly Asn Ser
 180 185 190
 Ala Lys Met Ala His Phe Ala Leu Val Ser Leu Ser Val Thr Val Asn
 195 200 205
 Val Asn Lys Leu
 210

<210> 74
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 74
 Ala Asn Ile Asp Arg His Thr Asn Ser Thr Leu Gly Ile Asp Leu Ser
 1 5 10 15
 Val Gly Ile Pro Ile Phe Tyr Asn Asp Leu Ser Lys Ala Tyr Pro Thr
 20 25 30
 Asn Leu Tyr Pro Gly Gly Ile Gly Ala Ile Lys Tyr Gln Tyr His Ile
 35 40 45
 Leu Asn Asn Leu Ala Ile Gly Leu Glu Leu Arg Tyr Met Phe Asn Phe
 50 55 60
 Asp Ile Asn His Ser Phe Asn Ile Leu Asn Pro Asp Ser Ser Val Gly
 65 70 75 80
 Lys Ile Phe Tyr Ser Val Pro Ile Thr Phe Ser Ile Asn Tyr Ile Phe
 85 90 95
 Asp Ile Gly Glu Leu Phe Gln Ile Pro Val Phe Thr Asn Ile Gly Phe
 100 105 110
 Ser Leu Asn Thr Tyr Gly Asp Arg Asn Asn Asn Ile Thr Asn Leu Arg
 115 120 125

Thr Phe Asp Ala Leu Pro Thr Ile Ser Phe Gly Ser Gly Ile Leu Trp
 130 135 140

Asn Phe Asn Tyr Lys Trp Ala Phe Gly Ala Thr Ala Ser Trp Trp Met
 145 150 155 160

Met Phe Glu Phe Gly Asn Ser Ala Lys Met Ala His Phe Ala Leu Val
 165 170 175

Ser Leu Ser Val Thr Val Asn Val Asn Lys Leu
 180 185

<210> 75
 <211> 639
 <212> DNA
 <213> Homo sapiens

<400> 75
 atgagaaagt atatTTTTat aataactaatt gcagtcttgc taattggtgt aaacataaaa 60
 aaaattgcgg cgcagccaa tattgatagg catacaaact ccactttagg aatagattta 120
 agtgtaggaa tccctatttt ttacaacgac ttatcaaaag cttatcctac caatttatat 180
 ccaggaggtta ttggggcaat aaaataccag taccatattt taaacaattt agcaattgga 240
 cttgaactaa ggtatatgtt taactttgat attaaccatt cttttaatat attaaatcca 300
 gattcaagtg taggtaaaaat tttttatagc gtgcctatta cattttcaat aaattatata 360
 tttgatatag gagaattatt tcaaattcca gtcttcacaa atatagggtt ttctcttaat 420
 acatatggag atagaaaacaa caatattaca aattttaagaa cttttgatgc actccctaca 480
 atctcttttg gatctggaat tttatggaac tttaactata aatgggcttt tggagcaaca 540
 gcatcttggt ggatgatgtt tgaatttgga aattctgcta aaatggcaca ttttgcactt 600
 gtatcattat cagttacagt gaatgtaaat aaattgtag 639

<210> 76
 <211> 564
 <212> DNA
 <213> Homo sapiens

<400> 76
 gccaatattg ataggcatatc aaactccact ttaggaatag atttaagtgt aggaatccct 60
 atttttttaca acgacttatc aaaagcttat cctaccaatt tatatccagg aggtattggg 120
 gcaataaaat accagtacca tatttttaaac aatttagcaa ttggacttga actaagggtat 180
 atgtttaact ttgatattaa ccattctttt aatatattaa atccagattc aagtgtagggt 240
 aaaatTTTTT atagcgtgcc tattacattt tcaataaatt atatatttga tataggagaa 300
 ttattttcaaa ttccagtctt cacaaatata gggttttctc ttaatacata tggagataga 360
 aacaacaata ttacaaattt aagaactttt gatgcactcc ctacaatctc ttttggatct 420
 ggaattttat ggaactttta ctataaatgg gcttttggag caacagcatc ttggtggatg 480
 atgtttgaat ttggaaattc tgctaaaatg gcacattttg cacttgtatc attatcagtt 540
 acagtgaatg taaataaatt gtag 564

<210> 77
 <211> 379
 <212> PRT
 <213> Homo sapiens

<400> 77
 Met Lys Asn Gln Phe Leu Asn Ser Tyr Phe Gln Leu Ile Thr Thr Ile
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Phe Leu Ile Ser Ser Ile Thr Ile Ala Ala Glu Glu Ile Thr Ser Thr
 20 25 30

Leu Lys Val Pro Asn Gly Phe Lys Val Glu Ile Phe Leu Asn Asn Thr
 35 40 45
 Ile Glu Lys Pro Arg Gly Ile Thr Ser Asp Gln Asp Gly Asn Ile Phe
 50 55 60
 Ile Gly Ser Gly Ser Thr Phe Ala Tyr Phe Val Thr Lys Asn Arg Lys
 65 70 75 80
 Ile Tyr Thr Ile Ala Lys Thr Leu Gln Lys Pro Ile Gly Ile Asp Tyr
 85 90 95
 Trp Asp Asn Lys Leu Tyr Ile Ser Ser Val Asp Lys Ile Tyr Val Val
 100 105 110
 Lys Asn Val Lys Glu Glu Ile Asn Lys Ser Ile Lys Ser His Lys Asp
 115 120 125
 Tyr Thr Trp Lys Met Gln Ile Phe Ala Leu Leu Pro Lys Asn Asn Ser
 130 135 140
 Gln Met His Ser Gly Arg Tyr Ile Lys Val Asp Ser Lys Asn Asn Lys
 145 150 155 160
 Leu Ile Val Asn Ile Gly Ser Gln His Asn Val Lys Ile Pro Pro Lys
 165 170 175
 Lys Glu Ala Val Ile Leu Ser Ile Asn Leu Lys Thr Lys Lys Glu Glu
 180 185 190
 Ile Val Ala Phe Gly Val Arg Asn Ser Val Gly Phe Asp Phe His Pro
 195 200 205
 Ile Ser Asn Glu Ile Tyr Phe Ser Asp Asn Gly Gln Asp Gly Leu Gly
 210 215 220
 Asp Asn Ile Pro Pro Asp Glu Ile Asn Val Ile Thr Glu Tyr Lys Glu
 225 230 235 240
 His Phe Gly Phe Pro Tyr Val Phe Gly Lys Asn Gln Lys Asn Tyr Gly
 245 250 255
 Phe Tyr Asn Lys Ala Pro Lys Asn Thr Lys Phe Ile Pro Ser Ile Tyr
 260 265 270
 Glu Leu Pro Ala His Val Ala Pro Leu Gly Ile His Phe Tyr Arg Gly
 275 280 285
 Asn Asn Phe Pro Lys Glu Tyr Ile Asn Lys Leu Phe Ile Ala Glu His
 290 295 300
 Gly Ser Trp Asn Arg Ser Ser Pro Val Gly Tyr Lys Ile Thr Thr Leu
 305 310 315 320
 Asp Ile Asp Ser Lys Thr Arg Thr Ala Arg Asn Tyr Lys Thr Phe Leu
 325 330 335
 Tyr Gly Phe Leu Lys His Asp Lys Ser Lys Phe Gly Arg Pro Val Asp
 340 345 350

Ile Ile Thr Tyr Tyr Asp Gly Ser Ile Leu Phe Thr Asp Asp Phe Gly
 355 360 365

Asn Lys Ile Tyr Arg Val Tyr Tyr Glu Lys Ile
 370 375

<210> 78
 <211> 352
 <212> PRT
 <213> Homo sapiens

<400> 78
 Glu Ile Thr Ser Thr Leu Lys Val Pro Asn Gly Phe Lys Val Glu Ile
 1 5 10 15

Phe Leu Asn Asn Thr Ile Glu Lys Pro Arg Gly Ile Thr Ser Asp Gln
 20 25 30

Asp Gly Asn Ile Phe Ile Gly Ser Gly Ser Thr Phe Ala Tyr Phe Val
 35 40 45

Thr Lys Asn Arg Lys Ile Tyr Thr Ile Ala Lys Thr Leu Gln Lys Pro
 50 55 60

Ile Gly Ile Asp Tyr Trp Asp Asn Lys Leu Tyr Ile Ser Ser Val Asp
 65 70 75 80

Lys Ile Tyr Val Val Lys Asn Val Lys Glu Glu Ile Asn Lys Ser Ile
 85 90 95

Lys Ser His Lys Asp Tyr Thr Trp Lys Met Gln Ile Phe Ala Leu Leu
 100 105 110

Pro Lys Asn Asn Ser Gln Met His Ser Gly Arg Tyr Ile Lys Val Asp
 115 120 125

Ser Lys Asn Asn Lys Leu Ile Val Asn Ile Gly Ser Gln His Asn Val
 130 135 140

Lys Ile Pro Pro Lys Lys Glu Ala Val Ile Leu Ser Ile Asn Leu Lys
 145 150 155 160

Thr Lys Lys Glu Glu Ile Val Ala Phe Gly Val Arg Asn Ser Val Gly
 165 170 175

Phe Asp Phe His Pro Ile Ser Asn Glu Ile Tyr Phe Ser Asp Asn Gly
 180 185 190

Gln Asp Gly Leu Gly Asp Asn Ile Pro Pro Asp Glu Ile Asn Val Ile
 195 200 205

Thr Glu Tyr Lys Glu His Phe Gly Phe Pro Tyr Val Phe Gly Lys Asn
 210 215 220

Gln Lys Asn Tyr Gly Phe Tyr Asn Lys Ala Pro Lys Asn Thr Lys Phe
 225 230 235 240

Ile Pro Ser Ile Tyr Glu Leu Pro Ala His Val Ala Pro Leu Gly Ile
 245 250 255

His Phe Tyr Arg Gly Asn Asn Phe Pro Lys Glu Tyr Ile Asn Lys Leu
260 265 270

Phe Ile Ala Glu His Gly Ser Trp Asn Arg Ser Ser Pro Val Gly Tyr
275 280 285

Lys Ile Thr Thr Leu Asp Ile Asp Ser Lys Thr Arg Thr Ala Arg Asn
290 295 300

Tyr Lys Thr Phe Leu Tyr Gly Phe Leu Lys His Asp Lys Ser Lys Phe
305 310 315 320

Gly Arg Pro Val Asp Ile Ile Thr Tyr Tyr Asp Gly Ser Ile Leu Phe
325 330 335

Thr Asp Asp Phe Gly Asn Lys Ile Tyr Arg Val Tyr Tyr Glu Lys Ile
340 345 350

<210> 79

<211> 1140

<212> DNA

<213> Homo sapiens

<400> 79

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gtcgaaattt ttttaaacia tacaattgaa aaacctagag gaatcacaa cgaatcaaat 180
ggaaatatat tcataggatc tgggaagcact tttgcatact ttgtaacaaa aaacagaaaa 240
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ctctacatat cttctgtcga taaaatatat gtagttaaaa atgtaaaaga agaaattaat 360
aaaagcataa aatcacataa agactataca tggaaaatgc aaatttttgc acttttgcca 420
aaaaataatt ctcaaatgca ctcaggacgt tacattaaag tagattctaa aaataacaaa 480
ttaatagtaa atataggatc ccagcacaaat gttaaaattc ccccaaaaaa agaagcagta 540
atccttagta ttaattttaa aacaaaaaaa gaagaaatag tagcttttgg agtgagaaac 600
tcagttgggt ttgattttca cccaattagc aatgaaatat attttagcga caatggccaa 660
gacggattag gagacaacat tccccagat gaaataaacg taataaccga atataaagaa 720
cattttggat ttccctatgt gtttggaaaa aatcaaaaaa attacgggtt ttataacaaa 780
gcacccaaaa acactaagtt tatcccatct atttacgaac ttcccgca tgtagctcca 840
cttggaaatac actttttacc gggaaataac tttccaaaag aatacataaa taaattattc 900
atagcagaac acggctcgtg gaacagatct tctcctgttg gctacaaaat aacaacacta 960
gacattgatt ctaaaaccag aacagcaaga aattacaaga cttttttata tggattttta 1020
aagcacgaca aatctaaatt tggacgccct gttgatataa tcacatatta tgacggttca 1080
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<210> 80

<211> 1059

<212> DNA

<213> Homo sapiens

<400> 80

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acaattgaaa aacctagagg aatcacaaag gatcaagatg gaaatatatt cataggatct 120
ggaagcactt ttgcatactt tgtaacaaaa aacagaaaaa tttataccat agcaaaaaacc 180
ctgcaaaaac ctatttggtat tgattattgg gataataaac tctacatata tctgtcgat 240
aaaatatatg tagttaaaaa tgtaaaagaa gaaattaata aaagcataaa atcacataaa 300
gactatacat ggaaaatgca aatttttgca cttttgccaa aaaataattc tcaaatgcac 360
tcaggacgtt acattaaagt agattctaaa aataacaaat taatagtaaa tataggatcc 420
cagcacaatg ttaaaattcc cccaaaaaaa gaagcagtaa tccttagtat taattttaa 480
acaaaaaaag aagaaatagt agcttttgga gtgagaaaact cagttgggtt tgattttcac 540
ccaattagca atgaaatata ttttagcgac aatggccaag acggattagg agacaacatt 600
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ccccagatg aaataaacgt aataaccgaa tataaagaac attttggatt tccctatgtg 660
tttggaaaaa atcaaaaaaa ttacgggtttt tataacaaag cacccaaaaa cactaagttt 720
atcccatcta tttagcaact tcccgacacat gtagctccac ttggaatata cttttaccgg 780
ggaaataact ttccaaaaga atacataaat aaattattca tagcagaaca cggctcgtgg 840
aacagatctt ctctgtgttg ctacaaaata acaacactag acattgattc taaaaccaga 900
acagcaagaa attacaagac ttttttatat ggatttttaa agcacgacaa atctaaattt 960
ggacgccctg ttgatataat cacatattat gacggttcaa ttctttttac agatgacttt 1020
ggaaataaaa tatacagagt ttactacgaa aagatttaa 1059

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<210> 81
 <211> 123
 <212> PRT
 <213> Homo sapiens

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<400> 81
Met Asn Tyr Ala Arg Phe Ala Val Leu Ile Val Leu Leu Phe Phe Tyr
 1          5          10          15
Ile Trp Phe Phe Ile Ile Leu Arg Met Lys Arg Thr Asn Leu Phe Leu
          20          25          30
Leu Glu Lys Ile Gln Asn Gly Ala Lys Ile Leu Asp Ile Arg Ser Pro
          35          40          45
Lys Glu Tyr Ser Lys Ser His Tyr Leu Lys Ser Ile Asn Ile Pro Phe
          50          55          60
Asn Asn Leu Phe Ala Lys Lys Asp Lys Leu Gly Asp Phe Glu Ser Pro
          65          70          75          80
Ile Ile Val Tyr Gly Lys Ser Phe Asn Lys Ser Tyr Glu Ala Lys Lys
          85          90          95
Val Leu Lys Ser Met Gly Phe Lys Asn Val Phe Val Ala Gly Thr Leu
          100          105          110
Lys Asp Met Pro Gln Ala Lys Lys Glu Val Gly
          115          120

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<210> 82
 <211> 100
 <212> PRT
 <213> Homo sapiens

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<400> 82
Arg Met Lys Arg Thr Asn Leu Phe Leu Leu Glu Lys Ile Gln Asn Gly
 1          5          10          15
Ala Lys Ile Leu Asp Ile Arg Ser Pro Lys Glu Tyr Ser Lys Ser His
          20          25          30
Tyr Leu Lys Ser Ile Asn Ile Pro Phe Asn Asn Leu Phe Ala Lys Lys
          35          40          45
Asp Lys Leu Gly Asp Phe Glu Ser Pro Ile Ile Val Tyr Gly Lys Ser
          50          55          60
Phe Asn Lys Ser Tyr Glu Ala Lys Lys Val Leu Lys Ser Met Gly Phe
          65          70          75          80

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Lys Asn Val Phe Val Ala Gly Thr Leu Lys Asp Met Pro Gln Ala Lys
85 90 95

Lys Glu Val Gly
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<210> 83
<211> 372
<212> DNA
<213> Homo sapiens

<400> 83
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aaaatttttg atattcggtc tcccaaagaa tatagcaagt ctcattattt gaagtcaatt 180
aacattcctt ttaataattt atttgctaaa aaggataaat taggtgattt tgagtcccca 240
ataattgttt atggtaaaag ttttaataag tcttacgagg ctaaaaaagt tttaaaaagc 300
atgggattta agaattgtgt tgttgctgga accttgaaag acatgccaca agcaaaaaaa 360
gaagttgggt ga 372

<210> 84
<211> 303
<212> DNA
<213> Homo sapiens

<400> 84
aggatgaaaa gaactaatct gtttttgcta gaaaaaatcc aaaatggagc aaaaattttg 60
gatattcggg ctcccaaaga atatagcaag ttcattatt tgaagtcaat taacattcct 120
tttaataatt tatttgctaa aaaggataaa ttaggtgatt ttgagtcccc aataattgtt 180
tatggtaaaa gttttaataa gtcttacgag gctaaaaaag ttttaaaaag catgggattt 240
aagaatgtgt ttgttgctgg aaccttgaaa gacatgccac aagcaaaaaa agaagttggt 300
tga 303

<210> 85
<211> 204
<212> PRT
<213> Homo sapiens

<400> 85
Met Ile Lys Lys Phe Leu Leu Phe Ala Met Leu Asn Ile Phe Leu Thr
1 5 10 15
Asn Lys Ala His Ser Asn Glu Glu Ile Ile Glu Ile Ser Thr Glu Ile
20 25 30
Gln Lys Glu Lys Tyr Ile Pro Phe Leu Ile Ser Arg Gly Lys Thr Gln
35 40 45
Leu Glu Asp Leu Val Lys Tyr Thr Leu Glu Ile Asn Pro Glu Leu Asp
50 55 60
Lys Asn Tyr Val Asn Thr Val Ala Lys Thr Tyr Ile Asp Glu Ser Leu
65 70 75 80
Ile Glu Gly Val Asn Tyr Asp Ile Ala Tyr Ala Gln Met Leu Leu Glu
85 90 95
Thr Gly Ala Leu Lys Phe Asn Gly Ile Val Ser Lys Glu Gln His Asn
100 105 110

Phe Ser Gly Ile Gly Ala Thr Asn Asn Leu Thr Lys Gly Asn Ser Phe
 115 120 125
 Ser Asn Ile Thr Glu Gly Ile Lys Ala His Ile Gln His Leu Lys Ala
 130 135 140
 Tyr Ala Ser Lys Gln Asn Ile Lys Ser Asn Met Val Asp Pro Arg Phe
 145 150 155 160
 Tyr Leu Val Lys Arg Gly Ser Ala Pro Thr Ile Tyr Asp Leu Thr Gly
 165 170 175
 Lys Trp Ala Lys Asp Lys Leu Tyr Asp Lys Lys Leu Lys Lys Ile Leu
 180 185 190
 Leu Glu Leu Leu Glu Tyr Asn Asn Ala Asn Lys Ser
 195 200

<210> 86
 <211> 183
 <212> PRT
 <213> Homo sapiens

<400> 86
 Asn Glu Glu Ile Ile Glu Ile Ser Thr Glu Ile Gln Lys Glu Lys Tyr
 1 5 10 15
 Ile Pro Phe Leu Ile Ser Arg Gly Lys Thr Gln Leu Glu Asp Leu Val
 20 25 30
 Lys Tyr Thr Leu Glu Ile Asn Pro Glu Leu Asp Lys Asn Tyr Val Asn
 35 40 45
 Thr Val Ala Lys Thr Tyr Ile Asp Glu Ser Leu Ile Glu Gly Val Asn
 50 55 60
 Tyr Asp Ile Ala Tyr Ala Gln Met Leu Leu Glu Thr Gly Ala Leu Lys
 65 70 75 80
 Phe Asn Gly Ile Val Ser Lys Glu Gln His Asn Phe Ser Gly Ile Gly
 85 90 95
 Ala Thr Asn Asn Leu Thr Lys Gly Asn Ser Phe Ser Asn Ile Thr Glu
 100 105 110
 Gly Ile Lys Ala His Ile Gln His Leu Lys Ala Tyr Ala Ser Lys Gln
 115 120 125
 Asn Ile Lys Ser Asn Met Val Asp Pro Arg Phe Tyr Leu Val Lys Arg
 130 135 140
 Gly Ser Ala Pro Thr Ile Tyr Asp Leu Thr Gly Lys Trp Ala Lys Asp
 145 150 155 160
 Lys Leu Tyr Asp Lys Lys Leu Lys Lys Ile Leu Leu Glu Leu Leu Glu
 165 170 175
 Tyr Asn Asn Ala Asn Lys Ser
 180

<210> 87
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 87
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 ttaataagta gaggaaaaaac tcaactagaa gaccttgtaa aatatactct agaaataaat 180
 ccagagcttg acaaaaacta tgtaaatact gttgctaaaa cctatataga cgaatctttg 240
 attgaagggg ttaattatga cattgcctat gctcaaagt tactagaaac aggagctcta 300
 aaattcaatg gaatagtttc aaaagaacaa cacaattttt caggaatagg cgctactaat 360
 aatcttacaa aaggaaattc tttttccaat attacagaag gaattaaagc tcatattcaa 420
 catttaaaag cttatgcttc aaaacaaaat atcaaataca atatggttga tcctagattt 480
 taccttggtt aaagaggatc tgctccaaca atatatgatt tgactgggaa atggggcaaaa 540
 gacaaacttt acgacaaaaa acttaaaaaa atattattag aactattaga atataataat 600
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<210> 88
 <211> 552
 <212> DNA
 <213> Homo sapiens

<400> 88
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 ataagtagag gaaaaactca actagaagac cttgtaaaat atactctaga aataaatcca 120
 gagcttgaca aaaactatgt aaatactggt gctaaaacct atatagacga atctttgatt 180
 gaaggggtta attatgacat tgcctatgct caaatgttac tagaaacagg agctctaaaa 240
 ttcaatggaa tagtttcaaa agaacaacac aatttttcag gaataggcgc tactaataat 300
 cttacaaaag gaaattcttt ttccaatatt acagaaggaa ttaaagctca tattcaacat 360
 ttaaaagctt atgcttcaaa acaaaatatt aaatcaaata tggttgatcc tagattttac 420
 cttgttaaaa gaggatctgc tccaacaata tatgatttga ctgggaaatg ggcaaaagac 480
 aaactttacg acaaaaaact taaaaaaata ttattagaac tattagaata taataatgca 540
 aataaaagct aa 552

<210> 89
 <211> 482
 <212> PRT
 <213> Homo sapiens

<400> 89
 Met Lys Leu Phe Arg Arg Asn Val Met Ile Lys Met Pro Ser Ser Phe
 1 5 10 15
 Thr Ile Ile Phe Ser Leu Ile Val Phe Val Thr Ile Leu Thr Tyr Val
 20 25 30
 Ile Pro Ala Gly Lys Phe Asp Lys Glu Phe Lys Gln Met Gly Asp Gly
 35 40 45
 Ser Lys Arg Glu Ile Ile Val Ala Gly Thr Tyr Gln Tyr Val Asp Arg
 50 55 60
 Gly Ser Arg Gly Phe Leu His Pro Ile Met Thr Ile Leu Thr Ala Met
 65 70 75 80
 Ser Lys Gly Met Glu His Ala Val Glu Val Ile Val Phe Val Leu Ile
 85 90 95
 Val Gly Gly Ala Tyr Gly Ile Ile Met Lys Thr Gly Ala Ile Asp Val

100					105					110					
Gly	Ile	Tyr	Phe	Leu	Ile	Lys	Lys	Leu	Gly	His	Lys	Asp	Lys	Leu	Leu
		115					120					125			
Ile	Pro	Leu	Leu	Met	Phe	Ile	Phe	Ser	Ile	Gly	Gly	Thr	Val	Thr	Gly
	130					135					140				
Met	Ser	Glu	Glu	Thr	Leu	Pro	Phe	Tyr	Phe	Val	Met	Ile	Pro	Leu	Ile
145					150					155					160
Val	Ala	Leu	Gly	Tyr	Asp	Ser	Leu	Val	Gly	Ala	Ala	Ile	Ile	Ala	Leu
				165					170					175	
Gly	Ala	Gly	Val	Gly	Thr	Met	Ala	Ser	Thr	Val	Asn	Pro	Phe	Ala	Thr
			180					185					190		
Gly	Ile	Ala	Ser	Ala	Ile	Ala	Ser	Ile	Ser	Leu	Gln	Asp	Gly	Phe	Tyr
		195					200					205			
Phe	Arg	Ile	Val	Leu	Tyr	Phe	Val	Ser	Val	Leu	Ala	Ala	Ile	Thr	Tyr
	210					215					220				
Val	Cys	Val	Tyr	Ala	Ser	Lys	Ile	Lys	Lys	Asp	Pro	Ser	Lys	Ser	Leu
225					230					235					240
Val	Tyr	Ser	Gln	Lys	Asp	Glu	His	Tyr	Gln	Tyr	Phe	Val	Lys	Lys	Asp
				245					250					255	
Gly	Leu	Ser	Thr	Gly	Asp	Asn	Ala	Gln	Asn	Ala	Leu	Glu	Phe	Thr	Phe
			260					265					270		
Ala	His	Lys	Leu	Val	Leu	Leu	Leu	Phe	Gly	Phe	Met	Ile	Leu	Ile	Leu
		275					280					285			
Ile	Phe	Ser	Ile	Val	Asn	Leu	Gly	Trp	Trp	Met	Gln	Glu	Met	Thr	Met
	290					295					300				
Leu	Tyr	Leu	Gly	Val	Ala	Ile	Ile	Ser	Ala	Phe	Ile	Cys	Lys	Leu	Gly
305					310					315					320
Glu	Thr	Glu	Met	Trp	Asp	Ala	Phe	Val	Lys	Gly	Ser	Glu	Ser	Leu	Leu
				325					330					335	
Thr	Ala	Ala	Leu	Val	Ile	Gly	Leu	Ala	Arg	Gly	Val	Met	Ile	Val	Cys
			340					345					350		
Asp	Asp	Gly	Leu	Ile	Thr	Asp	Thr	Met	Leu	Asn	Ala	Ala	Thr	Asn	Phe
		355					360					365			
Leu	Tyr	Asn	Leu	Pro	Arg	Pro	Leu	Phe	Ile	Ile	Leu	Asn	Glu	Ile	Ile
	370					375					380				
Gln	Ile	Phe	Ile	Gly	Phe	Val	Val	Pro	Ser	Ser	Ser	Gly	His	Ala	Ser
385					390					395					400
Leu	Thr	Met	Pro	Ile	Met	Ala	Pro	Leu	Ala	Asp	Phe	Leu	Ser	Ile	Pro
				405					410					415	
Arg	Ala	Ser	Val	Val	Ile	Ala	Met	Gln	Thr	Ala	Ser	Gly	Leu	Ile	Asn

420 425 430
 Leu Ile Thr Pro Thr Ser Gly Val Ile Met Ala Val Leu Gly Ile Ser
 435 440 445
 Arg Leu Ser Tyr Gly Thr Trp Phe Lys Phe Val Leu Pro Leu Phe Met
 450 455 460
 Ile Glu Phe Phe Ile Ser Ile Leu Val Ile Ile Ala Asn Ile Tyr Leu
 465 470 475 480
 Ser Phe

 <210> 90
 <211> 446
 <212> PRT
 <213> Homo sapiens

 <400> 90
 Lys Phe Asp Lys Glu Phe Lys Gln Met Gly Asp Gly Ser Lys Arg Glu
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 Ile Ile Val Ala Gly Thr Tyr Gln Tyr Val Asp Arg Gly Ser Arg Gly
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 Phe Leu His Pro Ile Met Thr Ile Leu Thr Ala Met Ser Lys Gly Met
 35 40 45
 Glu His Ala Val Glu Val Ile Val Phe Val Leu Ile Val Gly Gly Ala
 50 55 60
 Tyr Gly Ile Ile Met Lys Thr Gly Ala Ile Asp Val Gly Ile Tyr Phe
 65 70 75 80
 Leu Ile Lys Lys Leu Gly His Lys Asp Lys Leu Leu Ile Pro Leu Leu
 85 90 95
 Met Phe Ile Phe Ser Ile Gly Gly Thr Val Thr Gly Met Ser Glu Glu
 100 105 110
 Thr Leu Pro Phe Tyr Phe Val Met Ile Pro Leu Ile Val Ala Leu Gly
 115 120 125
 Tyr Asp Ser Leu Val Gly Ala Ala Ile Ile Ala Leu Gly Ala Gly Val
 130 135 140
 Gly Thr Met Ala Ser Thr Val Asn Pro Phe Ala Thr Gly Ile Ala Ser
 145 150 155 160
 Ala Ile Ala Ser Ile Ser Leu Gln Asp Gly Phe Tyr Phe Arg Ile Val
 165 170 175
 Leu Tyr Phe Val Ser Val Leu Ala Ala Ile Thr Tyr Val Cys Val Tyr
 180 185 190
 Ala Ser Lys Ile Lys Lys Asp Pro Ser Lys Ser Leu Val Tyr Ser Gln
 195 200 205
 Lys Asp Glu His Tyr Gln Tyr Phe Val Lys Lys Asp Gly Leu Ser Thr

210		215		220
Gly Asp Asn Ala Gln Asn Ala Leu Glu Phe Thr Phe Ala His Lys Leu				
225		230		240
Val Leu Leu Leu Phe Gly Phe Met Ile Leu Ile Leu Ile Phe Ser Ile				
	245		250	255
Val Asn Leu Gly Trp Trp Met Gln Glu Met Thr Met Leu Tyr Leu Gly				
	260		265	270
Val Ala Ile Ile Ser Ala Phe Ile Cys Lys Leu Gly Glu Thr Glu Met				
	275		280	285
Trp Asp Ala Phe Val Lys Gly Ser Glu Ser Leu Leu Thr Ala Ala Leu				
	290		295	300
Val Ile Gly Leu Ala Arg Gly Val Met Ile Val Cys Asp Asp Gly Leu				
305		310		315
Ile Thr Asp Thr Met Leu Asn Ala Ala Thr Asn Phe Leu Tyr Asn Leu				
	325		330	335
Pro Arg Pro Leu Phe Ile Ile Leu Asn Glu Ile Ile Gln Ile Phe Ile				
	340		345	350
Gly Phe Val Val Pro Ser Ser Ser Gly His Ala Ser Leu Thr Met Pro				
	355		360	365
Ile Met Ala Pro Leu Ala Asp Phe Leu Ser Ile Pro Arg Ala Ser Val				
	370		375	380
Val Ile Ala Met Gln Thr Ala Ser Gly Leu Ile Asn Leu Ile Thr Pro				
385		390		395
Thr Ser Gly Val Ile Met Ala Val Leu Gly Ile Ser Arg Leu Ser Tyr				
	405		410	415
Gly Thr Trp Phe Lys Phe Val Leu Pro Leu Phe Met Ile Glu Phe Phe				
	420		425	430
Ile Ser Ile Leu Val Ile Ile Ala Asn Ile Tyr Leu Ser Phe				
	435		440	445

<210> 91

<211> 1449

<212> DNA

<213> Homo sapiens

<400> 91

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gaatttaagc aaatgggtga tggatctaaa agggaaataa ttgttgctgg aacttatcaa 180
tatgtagatc gaggctctag gggattttta catcctatta tgactatttt aaccgcaatg 240
tcaaagggga tggaacatgc agttgaagtt attgtttttg ttttaattgt tgggggtgct 300
tatgggatta ttatgaaaac tggagcaata gatgtgggaa tttatttttt aatcaagaag 360
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actgtaaccg gaatgagtga agagaccctt cctttttatt ttgttatgat tcccttgata 480
gtagctttgg gttatgatag tcttgttgga gcggctatta ttgctttagg agctggagtg 540
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attagcttgc aggatggatt ttatttttaga attgttcttt attttgtatc agtattggct 660
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gtgtattctc aaaaagatga acattatcaa tattttgtta aaaaagatgg actttctacc 780
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<210> 92
 <211> 1341
 <212> DNA
 <213> Homo sapiens

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<210> 93
 <211> 469
 <212> PRT
 <213> Homo sapiens

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<400> 93
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      20                      25                      30

Glu Ile Thr Glu Asn Lys Pro Val Glu Arg Glu Asn Ser Ser Lys Gly
      35                      40                      45

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Glu Asn Phe Ser Asn Val Gly Leu Asp Gly Lys Tyr Val Asn Asp Thr
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 Ile Leu Tyr Gly Leu Asp Ser Gln Val Thr Ser Ile Ile Lys Ala Leu
 65 70 75 80
 Lys Lys Ser Ser Asp Ser Gln Tyr Asn Phe Ser Leu Lys Lys Arg Leu
 85 90 95
 Glu Lys Thr Phe Asn Ala Glu Leu Lys Arg Glu Ile Leu Glu Leu Phe
 100 105 110
 Ile Ser Leu Lys Tyr Ser Gly Gly Ile Asp Thr Ala Asn Tyr Ile Leu
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 Glu Asn Tyr Glu Ser Lys Arg Tyr Ser Asn Ala Leu Phe Gly Leu Ala
 130 135 140
 Ile Ser Tyr Leu Lys Glu Phe Asp Asp Lys Glu Lys Leu Lys Lys Thr
 145 150 155 160
 Leu Ile Asp Ile Leu Glu Asn Lys Glu Gly Asn Val Val Ser Ile Ala
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 Ala Tyr Tyr Leu Gly Glu Leu Asn Ser Leu Glu Tyr Ser Lys Asn Met
 180 185 190
 Met Glu Val Phe Glu Lys Tyr Ser Gly Asn Asp Gly Ala Arg Arg Glu
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 Ile Leu Ile Ala Leu Gly Lys Met Ser Ala Val Asp Tyr Gln Asp Arg
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 Ile Tyr Glu Ile Ser Leu Asp Asn Tyr Glu Gly Pro Ser Ile Lys Ala
 225 230 235 240
 Ala Ala Ile Glu Ala Leu Ser Tyr Leu Ala Ser Asp Lys Val Thr Glu
 245 250 255
 Asn Ala Asp Leu Tyr Leu Gln Ser Asn Asn Asn Asn Leu Asn Val Lys
 260 265 270
 Leu Ala Ile Ile Ala Ser Leu Ser Lys Asp Pro Ser Leu Lys Ser Lys
 275 280 285
 Glu Ile Leu Gln Gly Phe Leu Arg Asp Ser Asp Asp Asn Ile Arg Phe
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 Lys Ala Ile Asn Ala Ile Lys Gly His Arg Asp Ser Ser Ala Lys Asp
 305 310 315 320
 Ile Leu Ile Tyr Lys Leu Lys Ser Asp Pro Ser Leu Lys Val Arg Glu
 325 330 335
 Ala Ser Ala Lys Ala Leu Ile Asp Met Asp Leu Gly Asn Ile Glu Ile
 340 345 350
 Lys Asn Ile Met Phe Asp Phe Lys Ile Asp Asn Asn Phe Lys Ile Ser
 355 360 365

Met Phe Ser Tyr Leu Leu Asp Lys Asp Ser Leu Lys Ala Leu Ser Ile
 370 375 380

Ala Leu Glu Ile Val Asn Lys Glu Asn Ile Asn Arg Pro Ser Asn Val
 385 390 395 400

Leu Arg Gly Val Ala Ser Met Leu Ala Gly Lys Lys Gly Asn Phe Asp
 405 410 415

Asn Phe Tyr Ser Lys Ile Ile Asp Ser Lys Asn Ile Asp Leu Arg His
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Leu Ala Leu Lys Gly Ala Val Tyr Asn Lys Ser Ser Ser Leu Ser Asp
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Lys Leu Lys Lys Ile Lys Ser Glu Thr Asn Ser Glu Tyr Ile Lys Met
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Leu Leu Lys Asp Tyr
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<210> 94
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 94
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 35 40 45

Val Thr Ser Ile Ile Lys Ala Leu Lys Lys Ser Ser Asp Ser Gln Tyr
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Asn Phe Ser Leu Lys Lys Arg Leu Glu Lys Thr Phe Asn Ala Glu Leu
 65 70 75 80

Lys Arg Glu Ile Leu Glu Leu Phe Ile Ser Leu Lys Tyr Ser Gly Gly
 85 90 95

Ile Asp Thr Ala Asn Tyr Ile Leu Glu Asn Tyr Glu Ser Lys Arg Tyr
 100 105 110

Ser Asn Ala Leu Phe Gly Leu Ala Ile Ser Tyr Leu Lys Glu Phe Asp
 115 120 125

Asp Lys Glu Lys Leu Lys Lys Thr Leu Ile Asp Ile Leu Glu Asn Lys
 130 135 140

Glu Gly Asn Val Val Ser Ile Ala Ala Tyr Tyr Leu Gly Glu Leu Asn
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Ser Leu Glu Tyr Ser Lys Asn Met Met Glu Val Phe Glu Lys Tyr Ser
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Gly Asn Asp Gly Ala Arg Arg Glu Ile Leu Ile Ala Leu Gly Lys Met
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 Ser Ala Val Asp Tyr Gln Asp Arg Ile Tyr Glu Ile Ser Leu Asp Asn
 195 200 205
 Tyr Glu Gly Pro Ser Ile Lys Ala Ala Ala Ile Glu Ala Leu Ser Tyr
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 Leu Ala Ser Asp Lys Val Thr Glu Asn Ala Asp Leu Tyr Leu Gln Ser
 225 230 235 240
 Asn Asn Asn Asn Leu Asn Val Lys Leu Ala Ile Ile Ala Ser Leu Ser
 245 250 255
 Lys Asp Pro Ser Leu Lys Ser Lys Glu Ile Leu Gln Gly Phe Leu Arg
 260 265 270
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 275 280 285
 His Arg Asp Ser Ser Ala Lys Asp Ile Leu Ile Tyr Lys Leu Lys Ser
 290 295 300
 Asp Pro Ser Leu Lys Val Arg Glu Ala Ser Ala Lys Ala Leu Ile Asp
 305 310 315 320
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 Asp Ser Leu Lys Ala Leu Ser Ile Ala Leu Glu Ile Val Asn Lys Glu
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 Asn Ile Asn Arg Pro Ser Asn Val Leu Arg Gly Val Ala Ser Met Leu
 370 375 380
 Ala Gly Lys Lys Gly Asn Phe Asp Asn Phe Tyr Ser Lys Ile Ile Asp
 385 390 395 400
 Ser Lys Asn Ile Asp Leu Arg His Leu Ala Leu Lys Gly Ala Val Tyr
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 Asn Lys Ser Ser Ser Leu Ser Asp Lys Leu Lys Lys Ile Lys Ser Glu
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<210> 95

<211> 1410

<212> DNA

<213> Homo sapiens

<400> 95

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<211> 1338

<212> DNA

<213> Homo sapiens

<400> 96

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<210> 97

<211> 506

<212> PRT

<213> Homo sapiens

<400> 97

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His	Ile	Ser	Asp	Ile	Val	Glu	Lys	Lys	Lys	Glu	Ala	Val	Ile	Ile	Asp
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Tyr	Leu	Ile	Gly	Leu	Lys	Asp	Asn	Glu	Ser	Phe	Phe	Leu	Ser	Asp	Ala
65					70					75					80
Phe	Leu	Lys	Glu	Asn	Asn	Phe	Tyr	Phe	Lys	Lys	Ala	Arg	Glu	Ser	Tyr
				85					90					95	
Ala	Lys	Lys	Asn	Ile	Gly	Leu	Thr	Asn	Tyr	Tyr	Leu	Asn	Lys	Ile	Val
			100					105					110		
Thr	Asn	Glu	Asn	Gln	His	Ser	Arg	Glu	Leu	Leu	Ala	Lys	Ala	Asn	Leu
		115					120					125			
Phe	Phe	Gly	Tyr	Val	Asn	Tyr	Glu	Asn	Gly	Phe	Tyr	Asp	Leu	Ser	Glu
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Tyr	Asn	Phe	Asp	Leu	Phe	Leu	Lys	Asp	Tyr	Lys	Tyr	Ser	His	Ala	Ser
145					150					155					160
Leu	Arg	Leu	Ala	Glu	Leu	Lys	Tyr	Leu	Val	Lys	Glu	Lys	Ser	Asp	Ala
				165					170					175	
Ile	Ser	Ala	Phe	Lys	Glu	Ile	Asn	Glu	Phe	Ser	Ile	Ser	Gly	Tyr	Asp
			180					185					190		
Arg	Glu	Ile	Tyr	Gly	Phe	Leu	Ser	Asn	Lys	Leu	Gly	Val	Ser	His	Leu
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Asn	Leu	Glu	Ser	Leu	Gly	Phe	Leu	Asp	Asn	Ser	Val	Phe	Asp	Thr	Phe
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Val	Phe	Asn	Asp	Asn	Ile	Phe	Val	Thr	Asn	Ile	Leu	Gly	Gly	Leu	Leu
225					230					235					240
Arg	Tyr	Asn	Ile	Lys	Lys	Asn	Asp	Cys	Arg	Val	Tyr	Leu	Lys	Asp	Lys
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Lys	Ser	Ile	Phe	Leu	Asn	Gly	Ile	Arg	Gly	Phe	Ala	Asp	Tyr	Asn	Gly
			260					265					270		
Thr	Ile	Tyr	Ile	Gly	Gly	Lys	Asn	Val	Val	Tyr	Tyr	Ile	Asp	Asp	Val
		275					280						285		
Asp	Gly	Asp	Leu	Lys	Gln	Ile	Asn	Val	Pro	Gly	Asn	Ala	Asp	Phe	Ser
	290					295					300				
Asn	Val	Gln	Val	Leu	Leu	Ala	Val	Lys	Asn	Gly	Ile	Phe	Val	Gly	Thr
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Leu	Asn	Ser	Gly	Leu	Trp	Phe	Tyr	Asp	Leu	Lys	Asn	Trp	Lys	Asn	Ile

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355	360	365
Val Asp Asn Leu Lys Lys Ile Glu His Leu Asp Phe Phe Ser Lys Asn		
370	375	380
Asp Asn Glu Lys Asn Ile Asn Phe Ile Lys Glu Tyr Lys Asp Ser Tyr		
385	390	400
Phe Val Gly Thr Tyr Gly Gly Gly Leu Phe Glu Leu Asn Leu Asn Lys		
405	410	415
Asn Ser Tyr Lys Lys His Val Ile Ala Asn Asn Ile Asp Val Asn Tyr		
420	425	430
Phe Met Asp Met Glu Ile Lys Asp Lys Lys Leu Leu Phe Ala Thr Phe		
435	440	445
Asp His Gly Leu Leu Ile Tyr Asp Ser Glu Asn Asp Asn Trp Asp Tyr		
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Phe Gly Pro Asn Asn Gly Leu Leu Asn Leu Asn Leu Ile Lys Val Ser		
465	470	475
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<210> 98
 <211> 485
 <212> PRT
 <213> Homo sapiens

<400> 98															
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Leu	Gly	Ser	Asn	Glu	Gly	Lys	Phe	Lys	Arg	Asp	Tyr	Leu	Ile	Gly	Leu
		35					40					45			
Lys	Asp	Asn	Glu	Ser	Phe	Phe	Leu	Ser	Asp	Ala	Phe	Leu	Lys	Glu	Asn
	50					55					60				
Asn	Phe	Tyr	Phe	Lys	Lys	Ala	Arg	Glu	Ser	Tyr	Ala	Lys	Lys	Asn	Ile
65					70					75				80	
Gly	Leu	Thr	Asn	Tyr	Tyr	Leu	Asn	Lys	Ile	Val	Thr	Asn	Glu	Asn	Gln
			85						90					95	
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Glu Ile Asn Glu Phe Ser Ile Ser Gly Tyr Asp Arg Glu Ile Tyr Gly 165 170 175		
Phe Leu Ser Asn Lys Leu Gly Val Ser His Leu Asn Leu Glu Ser Leu 180 185 190		
Gly Phe Leu Asp Asn Ser Val Phe Asp Thr Phe Val Phe Asn Asp Asn 195 200 205		
Ile Phe Val Thr Asn Ile Leu Gly Gly Leu Leu Arg Tyr Asn Ile Lys 210 215 220		
Lys Asn Asp Cys Arg Val Tyr Leu Lys Asp Lys Lys Ser Ile Phe Leu 225 230 235 240		
Asn Gly Ile Arg Gly Phe Ala Asp Tyr Asn Gly Thr Ile Tyr Ile Gly 245 250 255		
Gly Lys Asn Val Val Tyr Tyr Ile Asp Asp Val Asp Gly Asp Leu Lys 260 265 270		
Gln Ile Asn Val Pro Gly Asn Ala Asp Phe Ser Asn Val Gln Val Leu 275 280 285		
Leu Ala Val Lys Asn Gly Ile Phe Val Gly Thr Leu Asn Ser Gly Leu 290 295 300		
Trp Phe Tyr Asp Leu Lys Asn Trp Lys Asn Ile Pro Leu Gly Ser Asn 305 310 315 320		
Lys Ile Ser Ser Leu Cys Phe Asp Ser Leu Lys Asn Leu Leu Val 325 330 335		
Gly Thr Val Asp Lys Ala Ile Tyr Ser Val Asn Val Asp Asn Leu Lys 340 345 350		
Lys Ile Glu His Leu Asp Phe Phe Ser Lys Asn Asp Asn Glu Lys Asn 355 360 365		
Ile Asn Phe Ile Lys Glu Tyr Lys Asp Ser Tyr Phe Val Gly Thr Tyr 370 375 380		
Gly Gly Gly Leu Phe Glu Leu Asn Leu Asn Lys Asn Ser Tyr Lys Lys 385 390 395 400		
His Val Ile Ala Asn Ile Asp Val Asn Tyr Phe Met Asp Met Glu 405 410 415		
Ile Lys Asp Lys Lys Leu Leu Phe Ala Thr Phe Asp His Gly Leu Leu		

420

425

430

Ile Tyr Asp Ser Glu Asn Asp Asn Trp Asp Tyr Phe Gly Pro Asn Asn
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Gly Leu Leu Asn Leu Asn Leu Ile Lys Val Ser Arg Phe Glu Asn Tyr
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Val Ile Leu Gly Thr Ile Asn Asn Gly Leu Val Phe Val Asp Glu Asn
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Ile Lys Lys Gln Leu
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<210> 99

<211> 1521

<212> DNA

<213> Homo sapiens

<400> 99

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aaaaagctat tgtttgcaac ctttgatcat gggttattga tttatgattc tgaaaatgac 1380
aactgggatt attttgacc caataatggg tctcttaatt tgaatttaaa aaaagtttct 1440
agatttgaaa attatgtcat actgggcact attaataacg gtttggtttt tgtagatgaa 1500
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1521

<210> 100

<211> 1458

<212> DNA

<213> Homo sapiens

<400> 100

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ggcttgacaa attattattt gaataaaaata gtaactaatg agaatacagca cagcagagaa 300
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ctttccgaat ataattttga tctattttta aaagactata aatattctca tgctagttaa 420

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 attaaaaaac agttatga 1458

<210> 101
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 101
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 Ala Glu Gln Trp Tyr Val Ile Phe Asn Ser Gln Met Lys Lys Lys Pro
 35 40 45
 Glu Asn Tyr Lys Lys Asn Ile Phe Phe Leu Gln Lys Ala Leu Lys Tyr
 50 55 60
 Pro Phe Gly Asn Pro Lys Tyr Ser Leu Thr Lys Ile Glu Thr Lys Glu
 65 70 75 80
 Gln Trp Glu Lys Tyr Lys Leu Leu Phe Lys Met His Val Asn Leu Leu
 85 90 95
 Leu Val Arg Gln Asn Leu His Leu Gly Asp Leu Phe Asp Thr Arg Asn
 100 105 110
 Leu Tyr Phe Phe Lys Thr Pro Glu Lys Asp Gly Ile Ile Ser Asn Leu
 115 120 125
 Glu Lys Ser Lys Lys Leu Tyr Lys Leu Ala Ile Asn Tyr Tyr Ser Glu
 130 135 140
 Ala Leu Lys Tyr His Lys Lys Leu Glu Asn Tyr Thr Thr Val Lys Leu
 145 150 155 160
 Glu Asn Asp Gly Ile Thr Asn Trp Glu Asp Glu Tyr His Lys Ile Ser
 165 170 175
 Leu Lys Glu Leu Asn Tyr Tyr Asp Ile Ile Lys Lys Glu Leu Leu Arg
 180 185 190

Ile Asp Glu Thr Lys Ala Phe Phe Glu Gln Gly Pro Asn Tyr Tyr
 195 200 205

<210> 102
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 102
 Lys Ile Asn Ala Ser Ser Lys Phe Tyr Tyr Ala Glu Gln Trp Tyr Val
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Ile Phe Asn Ser Gln Met Lys Lys Lys Pro Glu Asn Tyr Lys Lys Asn
 20 25 30

Ile Phe Phe Leu Gln Lys Ala Leu Lys Tyr Pro Phe Gly Asn Pro Lys
 35 40 45

Tyr Ser Leu Thr Lys Ile Glu Thr Lys Glu Gln Trp Glu Lys Tyr Lys
 50 55 60

Leu Leu Phe Lys Met His Val Asn Leu Leu Leu Val Arg Gln Asn Leu
 65 70 75 80

His Leu Gly Asp Leu Phe Asp Thr Arg Asn Leu Tyr Phe Phe Lys Thr
 85 90 95

Pro Glu Lys Asp Gly Ile Ile Ser Asn Leu Glu Lys Ser Lys Lys Leu
 100 105 110

Tyr Lys Leu Ala Ile Asn Tyr Tyr Ser Glu Ala Leu Lys Tyr His Lys
 115 120 125

Lys Leu Glu Asn Tyr Thr Thr Val Lys Leu Glu Asn Asp Gly Ile Thr
 130 135 140

Asn Trp Glu Asp Glu Tyr His Lys Ile Ser Leu Lys Glu Leu Asn Tyr
 145 150 155 160

Tyr Asp Ile Ile Lys Lys Glu Leu Leu Arg Ile Asp Glu Thr Lys Ala
 165 170 175

Phe Phe Glu Gln Gly Pro Asn Tyr Tyr
 180 185

<210> 103
 <211> 624
 <212> DNA
 <213> Homo sapiens

<400> 103
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 aattctcaaa tgaaaaaaaa acctgaaaac tataaaaaaa atatattttt tcttcaaaaa 180
 gccttaaaat acccatttgg aaatccaaaa tattctctaa ctaaaataga aaccaaagaa 240
 cagtgggaaa aatataaact tcttttcaaa atgcatgtaa acttgcttct agttaggcaa 300
 aatttacatt taggagattt attcgacaca agaaatttat attttttcaa aactccagaa 360
 aaagatggaa ttatttccaa tctagaaaaa tcaaaaaaat tatataaact agctattaat 420
 tactacagcg aagcactaaa ataccacaaa aaacttgaaa attacacaac tgtaaacta 480

gaaaacgatg gaataacaaa ctgggaagat gaatatcata aaatttctct taaagagctt 540
aattactatg acattatttaa aaaagaacta ctaagaattg acgaaactaa agcatttttt 600
gaacaagggc caaactatta ttaa 624

<210> 104
<211> 558
<212> DNA
<213> Homo sapiens

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aaataccat ttggaaatcc aaaatattct ctaactaaaa tagaaaccaa agaacagtgg 180
gaaaaatata aacttctttt caaaatgcat gtaaacttgc ttctagttag gcaaaattta 240
catttaggag atttattcga cacaagaaat ttatatTTTT tcaaaactcc agaaaaagat 300
ggaattattt ccaatctaga aaaatcaaaa aaattatata aactagctat taattactac 360
agcgaagcac taaaatacca caaaaaactt gaaaattaca caactgttaa actagaaaaac 420
gatggaataa caaactggga agatgaatat cataaaattt ctcttaaaga gcttaattac 480
tatgacatta ttaaaaaaga actactaaga attgacgaaa ctaaagcatt ttttgaacaa 540
gggccaaact attattaa 558

<210> 105
<211> 538
<212> PRT
<213> Homo sapiens

<400> 105
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Leu Leu Phe Ser Cys Ala Leu Ile Ala Asp Asn Lys Ser Lys Asn Leu
20 25 30
Ser Thr Ser Glu Ile Ile Leu Thr Gln Lys Thr Leu Leu Glu Ser Ser
35 40 45
Leu Ile Lys Asn Pro Ser Asn Val Glu Tyr Arg Ile Pro Ile Ser Ser
50 55 60
Ile Gln Glu Ile Leu Asn Asn Asn Asp Ser Phe Leu Ile Lys Lys
65 70 75 80
Thr Ala Ala Lys Ile Lys Ile Ser Pro Gln Lys Leu Glu Glu Ile Lys
85 90 95
Asn Tyr Leu Asn Ala Tyr Lys Asn Tyr Leu Asn Asn Glu Thr Glu Trp
100 105 110
Ile Lys Phe Ile Asp Gln Ser Ser Val Asn Gly Asn Leu Thr Ile Lys
115 120 125
Ile Asp Thr Ala Phe Glu Lys Lys Thr Asn Phe Asn His Thr Asn Ser
130 135 140
Asp Asn Glu Asn Leu Thr Glu Leu Ile Glu Leu Gln Met His Leu Glu
145 150 155 160
Lys Glu Ile Leu Asn Leu Ile Glu Gln Thr Phe His Asp Lys Asn Leu
165 170 175

Gly Tyr Ile Gln Leu Ser His Ile Asn Ser Phe Phe Pro Gln Glu Asn
 180 185 190
 Ile Asn Ser Ile Thr Lys Glu Ile Ile Asp Gly Lys Glu Tyr Ile Ala
 195 200 205
 Pro His Ile Ile Ala Asn Gln Leu Leu Lys Ile Lys Asp Lys Lys Tyr
 210 215 220
 Phe Glu Gln Phe Met His Phe Leu Lys Val Glu Asn Ser Lys Ile Lys
 225 230 235 240
 Thr Ile Ile Glu Lys Gln Lys Ile Ser Asp Leu His Asn Glu Leu Tyr
 245 250 255
 Tyr Ser Lys Gln Ser Pro Pro Arg Arg Arg Lys Arg Ser Thr Ala Asp
 260 265 270
 Ser Asp Asn Asn Asn Lys Tyr Asp Ile Ile Pro Lys Ile Ile Asp Pro
 275 280 285
 Asn Thr Gly Ile Glu Ile Thr Pro Lys Asn Leu Arg Ser Ile Leu Ser
 290 295 300
 Asn Gly Asp Ile Ile Leu Ile Lys Pro Lys Ile Asp Trp Thr Glu Phe
 305 310 315 320
 Phe Tyr Phe Trp Gln His Val Gly Ile Phe Asp Glu Glu Lys Tyr Glu
 325 330 335
 Ala Thr Lys Lys Ile Ala Phe Asn Gly Ile Asp Ser Phe Asp Ile Lys
 340 345 350
 Ser Ile Ile Thr Ser Asn Gln Ile Lys Phe Asp Thr Ala Ser Thr Gln
 355 360 365
 Gly Ser Gly Tyr Glu Lys Leu Ser Thr Tyr Val Gln Ser Arg Ile Leu
 370 375 380
 Lys Ile Phe Ser Pro Ile Thr Asp Ile Arg Thr Ile Gln Lys Ala Ile
 385 390 395 400
 Asn Phe Gly Arg Ser Arg Tyr Ile Asp Asn Asn Phe Gly Tyr Met Val
 405 410 415
 Pro Leu Ile Ser Ser Asn Leu Trp Thr Asp Ser Phe Asn Leu Glu Glu
 420 425 430
 Ile His Asn Lys Thr Tyr Cys Ser Leu Met Val Asp Arg Ile Tyr Lys
 435 440 445
 Ile Ala Gly Leu Asn Val Ser Arg Asn Tyr Glu Ile Ser Gly Ile Ile
 450 455 460
 Thr Pro Gly Glu Ile Asn Ala Ala Ala Tyr Asn Phe Tyr Met Ser Tyr
 465 470 475 480
 Thr Ile Ala Gly Ile Leu Pro Ser Val Leu Pro Lys Arg Leu Ile Lys
 485 490 495

Pro Thr Leu Lys Glu Lys Phe Ile Gly Tyr Asn Lys Glu Ile Val Asp
500 505 510

Ala Ile Glu Leu Lys Lys Ser Lys Glu Lys Ile Phe Gly Arg Ala Cys
515 520 525

Asn Ile Thr Asn Leu Trp Cys Ser Gly Ser
530 535

<210> 106

<211> 518

<212> PRT

<213> Homo sapiens

<400> 106

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20 25 30

Pro Ser Asn Val Glu Tyr Arg Ile Pro Ile Ser Ser Ile Gln Glu Ile
35 40 45

Leu Asn Asn Asn Asn Asp Ser Phe Leu Ile Lys Lys Thr Ala Ala Lys
50 55 60

Ile Lys Ile Ser Pro Gln Lys Leu Glu Glu Ile Lys Asn Tyr Leu Asn
65 70 75 80

Ala Tyr Lys Asn Tyr Leu Asn Asn Glu Thr Glu Trp Ile Lys Phe Ile
85 90 95

Asp Gln Ser Ser Val Asn Gly Asn Leu Thr Ile Lys Ile Asp Thr Ala
100 105 110

Phe Glu Lys Lys Thr Asn Phe Asn His Thr Asn Ser Asp Asn Glu Asn
115 120 125

Leu Thr Glu Leu Ile Glu Leu Gln Met His Leu Glu Lys Glu Ile Leu
130 135 140

Asn Leu Ile Glu Gln Thr Phe His Asp Lys Asn Leu Gly Tyr Ile Gln
145 150 155 160

Leu Ser His Ile Asn Ser Phe Phe Pro Gln Glu Asn Ile Asn Ser Ile
165 170 175

Thr Lys Glu Ile Ile Asp Gly Lys Glu Tyr Ile Ala Pro His Ile Ile
180 185 190

Ala Asn Gln Leu Leu Lys Ile Lys Asp Lys Lys Tyr Phe Glu Gln Phe
195 200 205

Met His Phe Leu Lys Val Glu Asn Ser Lys Ile Lys Thr Ile Ile Glu
210 215 220

Lys Gln Lys Ile Ser Asp Leu His Asn Glu Leu Tyr Tyr Ser Lys Gln
225 230 235 240

Ser Pro Pro Arg Arg Arg Lys Arg Ser Thr Ala Asp Ser Asp Asn Asn
 245 250 255
 Asn Lys Tyr Asp Ile Ile Pro Lys Ile Ile Asp Pro Asn Thr Gly Ile
 260 265 270
 Glu Ile Thr Pro Lys Asn Leu Arg Ser Ile Leu Ser Asn Gly Asp Ile
 275 280 285
 Ile Leu Ile Lys Pro Lys Ile Asp Trp Thr Glu Phe Phe Tyr Phe Trp
 290 295 300
 Gln His Val Gly Ile Phe Asp Glu Glu Lys Tyr Glu Ala Thr Lys Lys
 305 310 315 320
 Ile Ala Phe Asn Gly Ile Asp Ser Phe Asp Ile Lys Ser Ile Ile Thr
 325 330 335
 Ser Asn Gln Ile Lys Phe Asp Thr Ala Ser Thr Gln Gly Ser Gly Tyr
 340 345 350
 Glu Lys Leu Ser Thr Tyr Val Gln Ser Arg Ile Leu Lys Ile Phe Ser
 355 360 365
 Pro Ile Thr Asp Ile Arg Thr Ile Gln Lys Ala Ile Asn Phe Gly Arg
 370 375 380
 Ser Arg Tyr Ile Asp Asn Asn Phe Gly Tyr Met Val Pro Leu Ile Ser
 385 390 395 400
 Ser Asn Leu Trp Thr Asp Ser Phe Asn Leu Glu Glu Ile His Asn Lys
 405 410 415
 Thr Tyr Cys Ser Leu Met Val Asp Arg Ile Tyr Lys Ile Ala Gly Leu
 420 425 430
 Asn Val Ser Arg Asn Tyr Glu Ile Ser Gly Ile Ile Thr Pro Gly Glu
 435 440 445
 Ile Asn Ala Ala Ala Tyr Asn Phe Tyr Met Ser Tyr Thr Ile Ala Gly
 450 455 460
 Ile Leu Pro Ser Val Leu Pro Lys Arg Leu Ile Lys Pro Thr Leu Lys
 465 470 475 480
 Glu Lys Phe Ile Gly Tyr Asn Lys Glu Ile Val Asp Ala Ile Glu Leu
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 Lys Lys Ser Lys Glu Lys Ile Phe Gly Arg Ala Cys Asn Ile Thr Asn
 500 505 510
 Leu Trp Cys Ser Gly Ser
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<210> 107

<211> 1617

<212> DNA

<213> Homo sapiens

<400> 107

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ccaatatcca	gtatccaaga	aattttaaac	aataacaatg	attctttttt	aataaaaaaa	240
acagcagcaa	aaatcaaaat	aagccctcaa	aaacttgaag	aaataaaaaa	ctatctaaat	300
gcttataaaa	attatctaaa	taatgaaaca	gaatggataa	agtttataga	tcaaagtagc	360
gtcaatggaa	atttaacaat	taaaattgat	actgcttttg	aaaaaaaaac	aaattttaat	420
catacaaatt	cagataatga	aaattttaaca	gaactaatag	aactacaaat	gcactctggaa	480
aaagaaat	taaacttaat	tgagcaaaca	tttcatgata	aaaatttagg	atatatacaa	540
ttaagtcaca	tcaactcatt	ctttcctcaa	gaaaatataa	actcaataac	aaaagaaata	600
atagatggaa	aagaatatat	tgaccgcac	ataatagcaa	atcaattatt	aaaaataaaa	660
gataaaaaat	attttgaaca	atttatgcac	tttttaaaag	ttgaaaacag	caaaataaaa	720
acaataattg	aaaaacaaaa	aatttcagat	cttcacaatg	aactgtatta	ttcaaaacaa	780
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aaattcgata	cagcatctac	tcaagggttca	ggatacga	agctttcaac	atacgtacaa	1140
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aaattttggaa	gaagtagata	cattgacaat	aactttggat	atatgggtcc	attaatatcc	1260
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tcgggaataa	ttactcctgg	agaaataaat	gcagcagctt	acaattttta	catgtcttat	1440
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gaaaaattca	ttgggttaca	taaagaaata	gtagatgcaa	tagaattaaa	aaaatcgaaa	1560
gaaaaaattt	ttgggagagc	ttgcaacatt	acaaatctct	ggtgctcagg	aagttaa	1617

<210> 108

<211> 1557

<212> DNA

<213> Homo sapiens

<400> 108

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ccaatatcca	gtatccaaga	aattttaaac	aataacaatg	attctttttt	aataaaaaaa	180
acagcagcaa	aaatcaaaat	aagccctcaa	aaacttgaag	aaataaaaaa	ctatctaaat	240
gcttataaaa	attatctaaa	taatgaaaca	gaatggataa	agtttataga	tcaaagtagc	300
gtcaatggaa	atttaacaat	taaaattgat	actgcttttg	aaaaaaaaac	aaattttaat	360
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aaagaaat	taaacttaat	tgagcaaaca	tttcatgata	aaaatttagg	atatatacaa	480
ttaagtcaca	tcaactcatt	ctttcctcaa	gaaaatataa	actcaataac	aaaagaaata	540
atagatggaa	aagaatatat	tgaccgcac	ataatagcaa	atcaattatt	aaaaataaaa	600
gataaaaaat	attttgaaca	atttatgcac	tttttaaaag	ttgaaaacag	caaaataaaa	660
acaataattg	aaaaacaaaa	aatttcagat	cttcacaatg	aactgtatta	ttcaaaacaa	720
tccccgcca	gaagaagaaa	aagggtcaact	gccgattccg	ataataacaa	taaatacgat	780
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<210> 109
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 109
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 Lys Asp Glu Asn Pro Val Phe Glu Asn Glu Val Leu Gly Tyr Trp Val
 35 40 45
 Gly Tyr Asn Asp Val Ser Asn Ile Lys Asn Ser Ile Ile Tyr Ile Tyr
 50 55 60
 Lys Tyr Asn Gly Glu Val Tyr Gly Arg Ile Leu Thr Ile Ile Lys Asp
 65 70 75 80
 Gly Lys Lys Tyr Asp Ala Lys Asn Pro Ser Gly Asp Thr Val Val Gly
 85 90 95
 Phe Glu Asn Leu Ala Ile Glu Gly Leu Asp Phe Met Trp Gly Leu Lys
 100 105 110
 Tyr Ser Ser Ser Ser Lys Lys Trp Asp Arg Gly Lys Ile Ile Asp Pro
 115 120 125
 Lys Asn Gly Lys Ile Tyr Asn Ser Glu Met Arg Val Asp Ser Lys Thr
 130 135 140
 Gly Asn Leu Ile Thr Lys Gly Lys Val Trp Ile Phe Gly Arg Ser Lys
 145 150 155 160
 Ile Trp Thr Arg Ala Lys Asp Asp Glu Ile Pro Lys Leu Asp Leu His
 165 170 175
 Asn Leu Val Pro Ala Pro Pro Val Lys Lys
 180 185

<210> 110
 <211> 164
 <212> PRT
 <213> Homo sapiens

<400> 110
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 20 25 30
 Asn Ile Lys Asn Ser Ile Ile Tyr Ile Tyr Lys Tyr Asn Gly Glu Val
 35 40 45
 Tyr Gly Arg Ile Leu Thr Ile Ile Lys Asp Gly Lys Lys Tyr Asp Ala
 50 55 60

Lys Asn Pro Ser Gly Asp Thr Val Val Gly Phe Glu Asn Leu Ala Ile
 65 70 75 80
 Glu Gly Leu Asp Phe Met Trp Gly Leu Lys Tyr Ser Ser Ser Ser Lys
 85 90 95
 Lys Trp Asp Arg Gly Lys Ile Ile Asp Pro Lys Asn Gly Lys Ile Tyr
 100 105 110
 Asn Ser Glu Met Arg Val Asp Ser Lys Thr Gly Asn Leu Ile Thr Lys
 115 120 125
 Gly Lys Val Trp Ile Phe Gly Arg Ser Lys Ile Trp Thr Arg Ala Lys
 130 135 140
 Asp Asp Glu Ile Pro Lys Leu Asp Leu His Asn Leu Val Pro Ala Pro
 145 150 155 160
 Pro Val Lys Lys

<210> 111
 <211> 561
 <212> DNA
 <213> Homo sapiens

<400> 111
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 aatgaagttt taggatattg ggttggttat aatgatgtaa gtaacataaa gaattctatt 180
 atctatatatt ataaatataa tggggaagtt tatggccgaa ttttaactat aataaaagat 240
 ggcaaaaagt atgatgctaa aaatccttca ggagatactg tagttgggtt tgaaaatcctt 300
 gcaatagagg gtcttgattt tatgtggggt cttaagtatt cttcttcttc taaaaagtgg 360
 gataggggca aaataataga tcctaaaaac ggtaaaattt ataattctga gatgcgtggt 420
 gatagtaaaa cgggaaatct tattaccaag gggaaagttt ggatttttgg tagaagtaaa 480
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 gcgccccctg tgaaaaaata a 561

<210> 112
 <211> 495
 <212> DNA
 <213> Homo sapiens

<400> 112
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 atttataaat ataatgggga agtttatggc cgaattttta ctataataaa agatggcaaa 180
 aagtatgatg ctaaaaatcc ttcaggagat actgtagttg ggtttgaaaa tcttgcaata 240
 gagggctcttg attttatgtg gggctcttaag tattcttctt cttctaaaaa gtgggatagg 300
 ggcaaaaata tagatcctaa aaacggtaaa atttataatt ctgagatgcg tgttgatagt 360
 aaaaccggaa atcttattac caaggggaaa gtttgattt ttggtagaag taaaatttgg 420
 acaagagcta aagatgatga aataccaaaa ttagatttgc ataattctgt tccagcgccc 480
 cctgtgaaaa aataa 495

<210> 113
 <211> 335
 <212> PRT
 <213> Homo sapiens

<400> 113

Met Asn Lys Leu Met Leu Met Leu Ile Thr Phe Ala Thr Ser Leu Leu
1 5 10 15
Ala Gln Thr Asn Lys Ala Ser Thr Gly Leu Lys Thr Asp Gln Ser Phe
20 25 30
Asn Asn Ser Leu Ser Glu Ser Val Lys Leu Lys Glu Ile Ala Asp Ile
35 40 45
Tyr Pro Thr Asn Thr Asn Phe Leu Thr Gly Ile Gly Ile Val Ala Gly
50 55 60
Leu Ala Gly Lys Gly Asp Ser Ile Lys Gln Lys Asp Leu Ile Ile Lys
65 70 75 80
Ile Leu Glu Glu Asn Asn Ile Ile Asn Glu Ile Gly Ser Asn Asn Ile
85 90 95
Glu Ser Lys Asn Ile Ala Leu Val Asn Val Ser Leu Gln Val Lys Gly
100 105 110
Asn Thr Ile Lys Gly Ser Lys His Lys Ala Cys Val Ala Ser Ile Leu
115 120 125
Asp Ser Lys Asp Leu Thr Asn Gly Ile Leu Leu Lys Thr Asn Leu Lys
130 135 140
Asn Lys Glu Gly Glu Ile Ile Ala Ile Ala Ser Gly Ile Thr Gln Pro
145 150 155 160
Asn Asn Lys Leu Lys Gly Ser Gly Tyr Thr Ile Asp Ser Val Ile Ile
165 170 175
Asn Glu Asn Gln Asn Ile Asn His Ser Tyr Asn Ile Ile Leu Lys Lys
180 185 190
Gly Asn Tyr Thr Leu Ile Asn Arg Ile His Lys Ile Leu Thr Ser Lys
195 200 205
Lys Ile Asn Asn Lys Ile Lys Ser Asp Ser Thr Ile Glu Ile Glu Ala
210 215 220
Lys Asn Ile Ser Leu Leu Glu Glu Ile Glu Asn Ile Lys Ile Glu Thr
225 230 235 240
Asn Pro Lys Ile Leu Ile Asp Lys Lys Asn Gly Ile Ile Leu Ala Ser
245 250 255
Glu Asn Ala Lys Ile Gly Thr Phe Thr Phe Ser Ile Glu Lys Asp Asn
260 265 270
Gln Asn Ile Phe Leu Ser Lys Asn Asn Lys Thr Thr Ile Gln Val Asn
275 280 285
Ser Met Lys Leu Asn Glu Phe Ile Leu Lys Asn Ser Asn Asn Leu Ser
290 295 300
Asn Lys Glu Leu Ile Gln Ile Ile Gln Ala Ala Gln Lys Ile Asn Lys
305 310 315 320

Leu Asn Gly Glu Leu Ile Leu Glu Glu Ile Asp Gly Asn Gln Asn
 325 330 335

<210> 114
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 114
 Leu Lys Thr Asp Gln Ser Phe Asn Asn Ser Leu Ser Glu Ser Val Lys
 1 5 10 15
 Leu Lys Glu Ile Ala Asp Ile Tyr Pro Thr Asn Thr Asn Phe Leu Thr
 20 25 30
 Gly Ile Gly Ile Val Ala Gly Leu Ala Gly Lys Gly Asp Ser Ile Lys
 35 40 45
 Gln Lys Asp Leu Ile Ile Lys Ile Leu Glu Glu Asn Asn Ile Ile Asn
 50 55 60
 Glu Ile Gly Ser Asn Asn Ile Glu Ser Lys Asn Ile Ala Leu Val Asn
 65 70 75 80
 Val Ser Leu Gln Val Lys Gly Asn Thr Ile Lys Gly Ser Lys His Lys
 85 90 95
 Ala Cys Val Ala Ser Ile Leu Asp Ser Lys Asp Leu Thr Asn Gly Ile
 100 105 110
 Leu Leu Lys Thr Asn Leu Lys Asn Lys Glu Gly Glu Ile Ile Ala Ile
 115 120 125
 Ala Ser Gly Ile Thr Gln Pro Asn Asn Lys Leu Lys Gly Ser Gly Tyr
 130 135 140
 Thr Ile Asp Ser Val Ile Ile Asn Glu Asn Gln Asn Ile Asn His Ser
 145 150 155 160
 Tyr Asn Ile Ile Leu Lys Lys Gly Asn Tyr Thr Leu Ile Asn Arg Ile
 165 170 175
 His Lys Ile Leu Thr Ser Lys Lys Ile Asn Asn Lys Ile Lys Ser Asp
 180 185 190
 Ser Thr Ile Glu Ile Glu Ala Lys Asn Ile Ser Leu Leu Glu Glu Ile
 195 200 205
 Glu Asn Ile Lys Ile Glu Thr Asn Pro Lys Ile Leu Ile Asp Lys Lys
 210 215 220
 Asn Gly Ile Ile Leu Ala Ser Glu Asn Ala Lys Ile Gly Thr Phe Thr
 225 230 235 240
 Phe Ser Ile Glu Lys Asp Asn Gln Asn Ile Phe Leu Ser Lys Asn Asn
 245 250 255
 Lys Thr Thr Ile Gln Val Asn Ser Met Lys Leu Asn Glu Phe Ile Leu
 260 265 270

Lys Asn Ser Asn Asn Leu Ser Asn Lys Glu Leu Ile Gln Ile Ile Gln
 275 280 285

Ala Ala Gln Lys Ile Asn Lys Leu Asn Gly Glu Leu Ile Leu Glu Glu
 290 295 300

Ile Asp Gly Asn Gln Asn
 305 310

<210> 115
 <211> 1008
 <212> DNA
 <213> Homo sapiens

<400> 115
 atgaacaaac taatgttgat gttaattaca tttgcaacga gtctattagc ccaaacaaac 60
 aaagcttcaa caggactaaa aacagatcaa tcattttaaca atagcctatc tgaaagcgta 120
 aaattaaaag aaattgcgga tatttatccc acaaatacaa attttttaac aggtattgga 180
 atagtgcgg gacttgctgg aaaaggagac tctataaaac aaaaagacct tataattaaa 240
 attttagaag aaaacaatat aataaatgaa ataggctcta ataacataga aagtaaaaaat 300
 attgcactag taaatgtcag tctccaagta aaaggtaata caatcaaagg ttcaaaacat 360
 aaagcttgcg ttgcatcaat actggactca aaagatttaa caaatggaat acttttataa 420
 acaaattcta aaaataaaga ggggggaaata atagcaattg catcaggaat tacacagccc 480
 aataataaat taaaaggatc tggatatact atagatagtg taataataaa tgagaatcaa 540
 aatattaacc acagttataa tataattcctt aaaaaaggaa attatacatt aataaataga 600
 attcataaaa tattaacctc taaaaaaatc aacaacaaaa ttaaatcaga cagcacaata 660
 gaaatagaag caaaaaacat aagcctatta gaagagattg aaaatattaa aatagaaacc 720
 aaccccaaga tattaataga caaaaaaaat ggtattatct tagcaagtga aaatgcaaaa 780
 ataggaactt ttacattttc cattgaaaaa gacaatcaaa acattttttt aagtaaaaaat 840
 aacaaaacaa caattcaagt aaactcaatg aaattaaatg aatttatatt aaaaaattcc 900
 aacaattcta gcaataaaga attaatcaaa ataattcaag ctgcgcaaaa aattaataaa 960
 ttaaatgggg aacttatctt ggaggaaatt gatggaaacc aaaattaa 1008

<210> 116
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 116
 ctaaaaacag atcaatcatt taacaatagc ctatctgaaa gcgtaaaatt aaaagaaatt 60
 gcggatattt atcccacaaa tacaaatttt ttaacaggta ttggaatagt agcgggactt 120
 gctggaaaag gagactctat aaaacaaaaa gaccttataa ttaaaatttt agaagaaaac 180
 aatataataa atgaaatagg ctctaataac atagaaagta aaaatattgc actagtaaat 240
 gtcagtctcc aagtaaaaagg taataacaatc aaagggttcaa aacataaagc ttgcgttgca 300
 tcaatactgg actcaaaaga tttacaacaaat ggaatacttt taaaaacaaa tcttaaaaaat 360
 aaagaggggg aaataatagc aattgcatca ggaattacac agcccaataa taaattaaaa 420
 ggatctggat atactataga tagtgtaata ataaatgaga atcaaaatat taaccacagt 480
 tataatataa ttcttaaaaa aggaaattat acattaataa atagaattca taaaatatta 540
 acctctaaaa aaatcaacaa caaaattaaa tcagacagca caatagaaat agaagcaaaa 600
 aacataagcc tattagaaga gattgaaaaat attaaaatag aaaccaaccc caagatatta 660
 atagacaaaa aaaatgggtat tatttttagca agtgaaaatg caaaaatagg aactttttaca 720
 ttttccattg aaaaagacaa tcaaaacatt tttttaagta aaaataacaa aacaacaatt 780
 caagtaaaact caatgaaatt aaatgaattt atattaaaaa attccaacaa tcttagcaat 840
 aaagaattaa ttcaaataat tcaagctgcg caaaaaatta ataaattaaa tgggggaactt 900
 atcttgaggg aaattgatgg aaacaaaaat taa 933

<210> 117
 <211> 117
 <212> PRT

<213> Homo sapiens

<400> 117

Met Cys Pro Ile Thr Phe Thr Ile Pro Phe Phe Leu Ala Ile Phe Phe
1 5 10 15
Ala Phe Ser Ser Ser Phe Val Thr Asp Ser Ser Val Ser Leu Leu Ser
20 25 30
Arg Asn Thr Ser Leu Phe Ser Thr Leu Thr Pro Ile Ser Leu Pro Ile
35 40 45
Ile Ser Gly Thr Leu Pro Ala Ile Val Thr Leu Ser Lys Lys Tyr Leu
50 55 60
Ser Ile Ser Leu Ser Phe Ser Lys Met Ile Phe Ile Lys Ser Leu Phe
65 70 75 80
Glu Val Ile Lys Leu Pro Ile Trp Leu Phe Ile Ile Phe Ala Ser Gly
85 90 95
Tyr Phe Leu Asn Ala Phe Ser Ile Phe Leu Cys Ile Ser Ser Phe Leu
100 105 110
Ser Phe Met Phe Ile
115

<210> 118

<211> 98

<212> PRT

<213> Homo sapiens

<400> 118

Ser Ser Phe Val Thr Asp Ser Ser Val Ser Leu Leu Ser Arg Asn Thr
1 5 10 15
Ser Leu Phe Ser Thr Leu Thr Pro Ile Ser Leu Pro Ile Ile Ser Gly
20 25 30
Thr Leu Pro Ala Ile Val Thr Leu Ser Lys Lys Tyr Leu Ser Ile Ser
35 40 45
Leu Ser Phe Ser Lys Met Ile Phe Ile Lys Ser Leu Phe Glu Val Ile
50 55 60
Lys Leu Pro Ile Trp Leu Phe Ile Ile Phe Ala Ser Gly Tyr Phe Leu
65 70 75 80
Asn Ala Phe Ser Ile Phe Leu Cys Ile Ser Ser Phe Leu Ser Phe Met
85 90 95
Phe Ile

<210> 119

<211> 354

<212> DNA

<213> Homo sapiens

<400> 119

atgtgtccta ttactttttac cattccattt tttctagcaa tattttttgc tttttcaagc 60
tccttttgta cggactcttc tgtgtctttg ctatcaagaa atacgtctct tttttctact 120
ttaactccaa tttctttgccc tattatttct ggtacgcttc ctgcaatagt tacgctgtcg 180
aaaaaatatc tgtcaatctc tttaagcttt tctaaaatga ttttcatcaa atctttattt 240
gaagtgatta aacttcccat atggttattc attatttttg catcaggata ctttttaaatt 300
gctttttcga tttttttgtg tatttcttct tttttatctt ttatgtttat atga 354

<210> 120
<211> 297
<212> DNA
<213> Homo sapiens

<400> 120
agctcctttg ttacggactc ttctgtgtct ttgctatcaa gaaatacgtc tcttttttct 60
actttaactc caatttcttt gcctattatt tctggtagcg ttcttgcaat agttacgctg 120
tcgaaaaaat atctgtcaat ctctttaagc ttttctaaaa tgattttcat caaatcttta 180
tttgaagtga ttaaacttcc catatgggta ttcattattt ttgcatcagg atacttttta 240
aatgcttttt cgattttttt gtgtatttct tcttttttat cttttatgtt tatatga 297

<210> 121
<211> 309
<212> PRT
<213> Homo sapiens

<400> 121
Met Ala Asn Val Ala Leu Ser Ser Gly Phe Ile Ser Gln Lys Ile Phe
1 5 10 15
Gly Ile Ile Ile Ile Met Val Phe Leu Pro Thr Ile Ile Ala Thr Pro
20 25 30
Ile Ile Asn Phe Leu Phe Lys Ile Asn Lys Ser Gly Leu Lys Lys Glu
35 40 45
Leu Pro Ile Asp Gln Asn Thr His Ile Cys Val Ser Phe Glu Tyr Asp
50 55 60
Asn Leu Ala Lys Ile Leu Ile Trp Asp Phe Lys Asn Glu Leu Arg Lys
65 70 75 80
Glu Gly Phe Phe Thr Gln Gln Ile Lys Asn Asp Ser Ser Gln Tyr Ile
85 90 95
Asn Ala Arg Lys Asn Asn Ile Ser Phe Ser Ile Lys Arg Glu Gly Ser
100 105 110
Lys Ile Thr Phe Glu Cys Pro Asn Asn His Leu Ile Ile Ile Gln Asp
115 120 125
Leu Phe Arg Glu Thr Ile Leu Asn Leu Glu Lys Ile Thr Lys Glu Val
130 135 140
Glu Thr Val Ser Leu Arg Ala Lys Lys Leu Asp Tyr Ser Ile Asn Tyr
145 150 155 160
Asp Lys Ile Leu Ser Asn Ile Asn Leu Asn Lys Arg Ile Lys Lys Glu
165 170 175
Asn Ile Ile Leu Glu Leu Lys Ser Ser Asn Lys Ala Asp Val Ile Arg
180 185 190

Glu Leu Leu Ser Val Ile Asn Ile Glu Ile Asp Lys Glu Arg Ile Phe
 195 200 205
 Gln Asp Leu Met Glu Arg Glu Lys Leu Ile Thr Thr Ala Leu Lys Glu
 210 215 220
 Gly Phe Ala Ile Pro His Leu Lys Thr Asn Leu Ile Ser Lys Ile His
 225 230 235 240
 Ile Ala Ile Gly Ile Ser His Glu Gly Ile Asp Phe Asn Ala Leu Asp
 245 250 255
 Lys Asn Leu Ser His Val Phe Ile Leu Ile Leu Cys Pro Ala Lys Asp
 260 265 270
 Tyr Val Ser Tyr Pro Arg Ile Leu Ala Ser Val Val Gly Lys Val Asp
 275 280 285
 Leu Tyr Lys Lys Glu Ile Leu Asn Ala Lys Thr Asp Lys Glu Ile Tyr
 290 295 300

Asn Ile Ile Val Ser
 305

<210> 122
 <211> 287
 <212> PRT
 <213> Homo sapiens

<400> 122

Val Phe Leu Pro Thr Ile Ile Ala Thr Pro Ile Ile Asn Phe Leu Phe
 1 5 10 15

Lys Ile Asn Lys Ser Gly Leu Lys Lys Glu Leu Pro Ile Asp Gln Asn
 20 25 30

Thr His Ile Cys Val Ser Phe Glu Tyr Asp Asn Leu Ala Lys Ile Leu
 35 40 45

Ile Trp Asp Phe Lys Asn Glu Leu Arg Lys Glu Gly Phe Phe Thr Gln
 50 55 60

Gln Ile Lys Asn Asp Ser Ser Gln Tyr Ile Asn Ala Arg Lys Asn Asn
 65 70 75 80

Ile Ser Phe Ser Ile Lys Arg Glu Gly Ser Lys Ile Thr Phe Glu Cys
 85 90 95

Pro Asn Asn His Leu Ile Ile Ile Gln Asp Leu Phe Arg Glu Thr Ile
 100 105 110

Leu Asn Leu Glu Lys Ile Thr Lys Glu Val Glu Thr Val Ser Leu Arg
 115 120 125

Ala Lys Lys Leu Asp Tyr Ser Ile Asn Tyr Asp Lys Ile Leu Ser Asn
 130 135 140

Ile Asn Leu Asn Lys Arg Ile Lys Lys Glu Asn Ile Ile Leu Glu Leu
 145 150 155 160

Lys Ser Ser Asn Lys Ala Asp Val Ile Arg Glu Leu Leu Ser Val Ile
 165 170 175
 Asn Ile Glu Ile Asp Lys Glu Arg Ile Phe Gln Asp Leu Met Glu Arg
 180 185 190
 Glu Lys Leu Ile Thr Thr Ala Leu Lys Glu Gly Phe Ala Ile Pro His
 195 200 205
 Leu Lys Thr Asn Leu Ile Ser Lys Ile His Ile Ala Ile Gly Ile Ser
 210 215 220
 His Glu Gly Ile Asp Phe Asn Ala Leu Asp Lys Asn Leu Ser His Val
 225 230 235 240
 Phe Ile Leu Ile Leu Cys Pro Ala Lys Asp Tyr Val Ser Tyr Pro Arg
 245 250 255
 Ile Leu Ala Ser Val Val Gly Lys Val Asp Leu Tyr Lys Lys Glu Ile
 260 265 270
 Leu Asn Ala Lys Thr Asp Lys Glu Ile Tyr Asn Ile Ile Val Ser
 275 280 285

<210> 123
 <211> 930
 <212> DNA
 <213> Homo sapiens

<400> 123
 atggcaaagt tagcattatc ttcaggattt attagccaaa aaatatttgg aatcataata 60
 ataatggtgt ttttgccaac aatcattgca acaccataa taaacttttt atttaaaata 120
 aataaaagt gacttaaaaa agaactccca atagatcaaa atacacacat atgcgtatca 180
 tttgaatatg ataatttagc caaaattctt atatgggact ttaaaaatga gttaagaaaa 240
 gaaggatttt ttacacaaca aattaaaaat gattcttcac aatatatta tgcaagaaaa 300
 aacaatatat ccttctcaat aaaacgagaa ggtagcaaaa tcacatttga atgcccaaat 360
 aatcatttaa ttataatata agatcttttt agagaaacaa tcttaaaccct agaaaaata 420
 accaaagaag ttgaaacagt ctctttaaga gcaaaaaaac tagattactc aataaattac 480
 gataaaatcc ttagtaatat caacctaaat aaaagaataa aaaaggaaaa cattattcta 540
 gaattaaaat caagcaataa ggctgatgta ataagagagc ttctaagcgt aataaacatt 600
 gaaattgata aagaaagaat attccaagat ttaattggaaa gagaaaagtt aattactact 660
 gcactaaaag aaggctttgc cattcccat ttaaaaaacaa atttaatatc aaaaatacat 720
 attgcaatag gaataagcca tgagggaatt gactttaatg ctcttgacaa gaacttaagt 780
 catgttttta tattaatact gtgccagca aaagattacg ttagctaccc tagaatttta 840
 gcatctgttg tgggcaaagt tgatctgtac aaaaaagaaa ttttaaatgc aaaaacagat 900
 aaagaaattt ataataaat agtgagctaa 930

<210> 124
 <211> 861
 <212> DNA
 <213> Homo sapiens

<400> 124
 tttttgccaa caatcattgc aacaccata ataaactttt tatttaaaat aaataaaagt 60
 ggacttaaaa aagaactccc aatagatcaa aatacacaca tatgcgtatc atttgaatat 120
 gataatttag ccaaaattct tatatgggac tttaaaaatg agttaagaaa agaaggattt 180
 tttacacaac aaattaaaaa tgattcttca caatatatta atgcaagaaa aaacaatata 240
 tccttctcaa taaaacgaga aggtagcaaa atcacatttg aatgcccaaa taatcattta 300
 attataatac aagatctttt tagagaaaca atcttaaacc tagaaaaaat aaccaagaa 360

gttgaaacag tctctttaag agcaaaaaaa ctagattact caataaatta cgataaaaatc 420
 ctttagtaata tcaacctaaa taaaagaata aaaaaggaaa acattattct agaattaaaa 480
 tcaagcaata aggctgatgt aataagagag cttctaagcg taataaacat tgaaattgat 540
 aaagaaagaa tattccaaga tttaatggaa agagaaaagt taattactac tgcactaaaa 600
 gaaggctttg ccattcccca tttaaaaaca aatttaatat caaaaataca tattgcaata 660
 ggaataagcc atgaggggaat tgactttaat gctcttgaca agaacttaag tcatgttttt 720
 atattaatac tgtgcccagc aaaagattac gtttagctacc ctagaatttt agcatctgtt 780
 gtgggcaaag ttgatctgta caaaaaagaa attttaaatg caaaaacaga taaagaaatt 840
 tataatataa tagtgagcta a 861

<210> 125

<211> 285

<212> PRT

<213> Homo sapiens

<400> 125

Met Glu Lys Pro Gln Gly Val Ser Ile Val Gly Ala Ile Ser Gly Ala
 1 5 10 15

Met His Val His Leu Met Ala Glu His Tyr Gly Val Pro Val Val Leu
 20 25 30

His Thr Asp His Cys Ala Lys Asn Leu Leu Pro Trp Val Glu Gly Leu
 35 40 45

Leu Glu Tyr Gly Glu Lys Tyr Tyr Ser Gln His Lys Lys Pro Leu Phe
 50 55 60

Ser Ser His Met Leu Asp Leu Ser Glu Glu Pro Ile Lys Glu Asn Ile
 65 70 75 80

Glu Ile Ser Lys Lys Phe Leu Glu Arg Met Ala Lys Ile Glu Met Phe
 85 90 95

Leu Glu Ile Glu Leu Gly Ile Thr Gly Gly Glu Glu Asp Gly Val Asp
 100 105 110

Asn Ser Asp Arg Ala Leu His Glu Leu Phe Ser Thr Pro Glu Asp Ile
 115 120 125

Tyr Tyr Gly Tyr Ser Glu Leu Leu Lys Val Ser Pro Asn Phe Gln Ile
 130 135 140

Ala Ala Ala Phe Gly Asn Val His Gly Val Tyr Lys Pro Gly Asn Val
 145 150 155 160

Lys Leu Thr Pro Lys Val Leu Lys Asp Gly Gln Asp Tyr Val Ile Ser
 165 170 175

Lys Thr Gly Val Asn Met Ala Lys Pro Val Ser Tyr Val Phe His Gly
 180 185 190

Gly Ser Gly Ser Thr Ile Asp Glu Ile Asn Glu Ala Leu Ser Tyr Gly
 195 200 205

Val Val Lys Met Asn Ile Asp Thr Asp Thr Gln Trp Ala Ala Trp Glu
 210 215 220

Gly Val Leu Asn Tyr Tyr Lys Lys Asn Glu Ser Arg Leu Gln Gly Gln
 225 230 235 240

Leu Gly Asp Gly Lys Asp Ile Asp Ile Pro Asn Lys Lys Phe Tyr Asp
 245 250 255

Pro Arg Val Trp Leu Arg Glu Ala Glu Val Ser Met Lys Asp Arg Val
 260 265 270

Lys Ile Ala Cys Lys Asn Leu Asn Asn Ile Asn Arg Asn
 275 280 285

<210> 126

<211> 269

<212> PRT

<213> Homo sapiens

<400> 126

Met His Val His Leu Met Ala Glu His Tyr Gly Val Pro Val Val Leu
 1 5 10 15

His Thr Asp His Cys Ala Lys Asn Leu Leu Pro Trp Val Glu Gly Leu
 20 25 30

Leu Glu Tyr Gly Glu Lys Tyr Tyr Ser Gln His Lys Lys Pro Leu Phe
 35 40 45

Ser Ser His Met Leu Asp Leu Ser Glu Glu Pro Ile Lys Glu Asn Ile
 50 55 60

Glu Ile Ser Lys Lys Phe Leu Glu Arg Met Ala Lys Ile Glu Met Phe
 65 70 75 80

Leu Glu Ile Glu Leu Gly Ile Thr Gly Gly Glu Glu Asp Gly Val Asp
 85 90 95

Asn Ser Asp Arg Ala Leu His Glu Leu Phe Ser Thr Pro Glu Asp Ile
 100 105 110

Tyr Tyr Gly Tyr Ser Glu Leu Leu Lys Val Ser Pro Asn Phe Gln Ile
 115 120 125

Ala Ala Ala Phe Gly Asn Val His Gly Val Tyr Lys Pro Gly Asn Val
 130 135 140

Lys Leu Thr Pro Lys Val Leu Lys Asp Gly Gln Asp Tyr Val Ile Ser
 145 150 155 160

Lys Thr Gly Val Asn Met Ala Lys Pro Val Ser Tyr Val Phe His Gly
 165 170 175

Gly Ser Gly Ser Thr Ile Asp Glu Ile Asn Glu Ala Leu Ser Tyr Gly
 180 185 190

Val Val Lys Met Asn Ile Asp Thr Asp Thr Gln Trp Ala Ala Trp Glu
 195 200 205

Gly Val Leu Asn Tyr Tyr Lys Lys Asn Glu Ser Arg Leu Gln Gly Gln
 210 215 220

Leu Gly Asp Gly Lys Asp Ile Asp Ile Pro Asn Lys Lys Phe Tyr Asp
 225 230 235 240

Pro Arg Val Trp Leu Arg Glu Ala Glu Val Ser Met Lys Asp Arg Val
 245 250 255

Lys Ile Ala Cys Lys Asn Leu Asn Asn Ile Asn Arg Asn
 260 265

<210> 127
 <211> 858
 <212> DNA
 <213> Homo sapiens

<400> 127
 atggaaaaac cacaaggagt ttcaatagtt ggagctatct ctggtgctat gcatgttcat 60
 ttaatggcag agcattatgg tgctcctggt gttcttcata ctgatcactg tgctaaaaat 120
 ttgcttcctt ggggttgaagg ccttttagaa tatggagaga aatactatag tcagcacaaa 180
 aaaccattat tttcttcaca tatgttagat ttatcagaag aacctattaa agaaaatatt 240
 gaaatttcta aaaaattctt agaaagaatg gcaaaaattg aaatgttttt ggaaatagag 300
 cttggaatta cgggtgggga agaggatgga gttgacaatt cagatagagc tttgcatgaa 360
 ctattttcta ctctgagga tatttattat ggatattcag aactttttaa agttagccca 420
 aattttcaga ttgcagcagc ttttggaat gttcatgggg tatataaacc ggggaatgtt 480
 aagcttactc caaaagtgtt aaaagatggt caagattatg tcatatcaaa aacaggagta 540
 aatatggcta agccagtgtt ttatgttttt catggagggt ctggatctac aattgatgag 600
 attaagagg cgctttctta tggcgttgta aagatgaata ttgacacaga tacacagtgg 660
 gctgcctggg aggggtgttt aaattattac aaaaaaatg aaagtcgttt gcaaggtcaa 720
 ttaggagatg gcaaggatat tgatattcca aataagaaat tttatgatcc aagggtttgg 780
 ttaagagaag ctgaagtgtt tatgaaagac cgtgtgaaga ttgcatgcaa aaatcttaat 840
 aatattaata gaaattaa 858

<210> 128
 <211> 810
 <212> DNA
 <213> Homo sapiens

<400> 128
 atgcatgttc atttaatggc agagcattat ggtgttcctg ttgttcttca tactgatcac 60
 tgtgctaaaa atttgcttcc ttgggttgaa ggccttttag aatatggaga gaaatactat 120
 agtcagcaca aaaaaccatt attttcttca catatgttag atttatcaga agaacctatt 180
 aaagaaaata ttgaaatttc taaaaaatc ttagaaagaa tggcaaaaat tgaaatgttt 240
 ttggaaatag agcttggaat tacgggtggg gaagaggatg gagttgacaa ttcagataga 300
 gctttgcatg aactattttc tactcctgag gatatttatt atggatattc agaactttta 360
 aaagttagcc caaattttca gattgcagca gcttttgaa atgttcatgg ggtatataaa 420
 ccggggaaatg ttaagcttac tccaaaagtt ttaaaagatg gtcaagatta tgtcatatca 480
 aaaacaggag taaatatggc taagccagtt tcttatgttt ttcattggagg gtctggatct 540
 acaattgatg agattaatga ggcgctttct tatggcgttg taaagatgaa tattgacaca 600
 gatacacagt gggctgcctg ggagggtgtt ttaaattatt acaaaaaaaa tgaaagtcgt 660
 ttgcaagggtc aattaggaga tggcaaggat attgatattc caaataagaa attttatgat 720
 ccaagggttt ggttaagaga agctgaagtt tctatgaaag accgtgtgaa gattgcatgc 780
 aaaaatctta ataatttaa tagaaattaa 810

<210> 129
 <211> 650
 <212> PRT
 <213> Homo sapiens

<400> 129
 Met Pro Ser Ser Phe Pro Phe Leu Leu Val Asn Gly Ser Ser Gly Ile
 1 5 10 15

Ala Val Gly Met Ala Thr Asn Met Ala Pro His Asn Leu Arg Glu Ile

20										25										30										
Cys	Asp	Ala	Ile	Val	Tyr	Met	Leu	Asp	Asn	Glu	Asn	Ala	Ser	Ile	Phe															
		35					40					45																		
Asp	Leu	Leu	Lys	Ile	Val	Lys	Gly	Pro	Asp	Phe	Pro	Thr	Phe	Gly	Glu															
	50					55					60																			
Ile	Val	Tyr	Asn	Asp	Asn	Leu	Ile	Lys	Ala	Tyr	Lys	Thr	Gly	Lys	Gly															
	65				70					75					80															
Ser	Val	Val	Ile	Arg	Ala	Arg	Tyr	His	Ile	Glu	Glu	Arg	Ala	Glu	Asp															
			85						90					95																
Arg	Asn	Ala	Ile	Ile	Val	Thr	Glu	Ile	Pro	Tyr	Thr	Val	Asn	Lys	Ser															
			100					105					110																	
Ala	Leu	Leu	Met	Lys	Val	Ala	Leu	Leu	Ala	Lys	Glu	Glu	Lys	Leu	Glu															
		115					120					125																		
Gly	Leu	Leu	Asp	Ile	Arg	Asp	Glu	Ser	Asp	Arg	Glu	Gly	Ile	Arg	Ile															
	130					135					140																			
Val	Leu	Glu	Val	Lys	Arg	Gly	Phe	Asp	Pro	His	Val	Ile	Met	Asn	Leu															
	145				150					155				160																
Leu	Tyr	Glu	Tyr	Thr	Glu	Phe	Lys	Lys	His	Phe	Ser	Ile	Asn	Asn	Leu															
			165						170					175																
Ala	Leu	Val	Asn	Gly	Ile	Pro	Lys	Gln	Leu	Asn	Leu	Glu	Glu	Leu	Leu															
		180						185					190																	
Phe	Glu	Phe	Ile	Glu	His	Arg	Lys	Asn	Ile	Ile	Glu	Arg	Arg	Ile	Glu															
	195					200						205																		
Phe	Asp	Leu	Arg	Lys	Ala	Lys	Glu	Lys	Ala	His	Val	Leu	Glu	Gly	Leu															
	210					215					220																			
Asn	Ile	Ala	Leu	Asn	Asn	Ile	Asp	Glu	Val	Ile	Lys	Ile	Ile	Lys	Ser															
	225				230					235				240																
Ser	Lys	Leu	Ala	Lys	Asp	Ala	Arg	Glu	Arg	Leu	Val	Ser	Asn	Phe	Gly															
			245					250						255																
Leu	Ser	Glu	Ile	Gln	Ala	Asn	Ser	Val	Leu	Asp	Met	Arg	Leu	Gln	Lys															
		260					265						270																	
Leu	Thr	Ala	Leu	Glu	Ile	Phe	Lys	Leu	Glu	Glu	Glu	Leu	Asn	Ile	Leu															
	275					280						285																		
Leu	Ser	Leu	Ile	Lys	Asp	Tyr	Glu	Asp	Ile	Leu	Leu	Asn	Pro	Val	Arg															
	290				295					300																				
Ile	Ile	Asn	Ile	Ile	Arg	Glu	Glu	Thr	Ile	Asn	Leu	Gly	Leu	Lys	Phe															
	305				310				315					320																
Gly	Asp	Glu	Arg	Arg	Thr	Lys	Ile	Ile	Tyr	Asp	Glu	Glu	Val	Leu	Lys															
			325					330					335																	
Thr	Ser	Met	Ser	Asp	Leu	Met	Gln	Lys	Glu	Asn	Ile	Val	Val	Met	Leu															

340	345	350
Thr Lys Lys Gly Phe Leu Lys Arg Leu Ser Gln Asn Glu Tyr Lys Leu		
355	360	365
Gln Gly Thr Gly Gly Lys Gly Leu Ser Ser Phe Asp Leu Asn Asp Gly		
370	375	380
Asp Glu Ile Val Ile Ala Leu Cys Val Asn Thr His Asp Tyr Leu Phe		
385	390	395
Met Ile Ser Asn Glu Gly Lys Leu Tyr Leu Ile Asn Ala Tyr Glu Ile		
405	410	415
Lys Asp Ser Ser Arg Ala Ser Lys Gly Gln Asn Ile Ser Glu Leu Ile		
420	425	430
Asn Leu Gly Asp Gln Glu Glu Ile Leu Thr Ile Lys Asn Ser Lys Asp		
435	440	445
Leu Thr Asp Asp Ala Tyr Leu Leu Leu Thr Thr Ala Ser Gly Lys Ile		
450	455	460
Ala Arg Phe Glu Ser Thr Asp Phe Lys Ala Val Lys Ser Arg Gly Val		
465	470	475
Ile Val Ile Lys Leu Asn Asp Lys Asp Phe Val Thr Ser Ala Glu Ile		
485	490	495
Val Phe Lys Asp Glu Lys Val Ile Cys Leu Ser Lys Lys Gly Ser Ala		
500	505	510
Phe Ile Phe Asn Ser Arg Asp Val Arg Leu Thr Asn Arg Gly Thr Gln		
515	520	525
Gly Val Cys Gly Met Lys Leu Lys Glu Gly Asp Leu Phe Val Lys Val		
530	535	540
Leu Ser Val Lys Glu Asn Pro Tyr Leu Leu Ile Val Ser Glu Asn Gly		
545	550	555
Tyr Gly Lys Arg Leu Asn Met Ser Lys Ile Ser Glu Leu Lys Arg Gly		
565	570	575
Ala Thr Gly Tyr Thr Ser Tyr Lys Lys Ser Asp Lys Lys Ala Gly Ser		
580	585	590
Val Val Asp Ala Ile Ala Val Ser Glu Asp Asp Glu Ile Leu Leu Val		
595	600	605
Ser Lys Arg Ser Lys Ala Leu Arg Thr Val Ala Gly Lys Val Ser Glu		
610	615	620
Gln Gly Lys Asp Ala Arg Gly Ile Gln Val Leu Phe Leu Asp Asn Asp		
625	630	635
Ser Leu Val Ser Val Ser Lys Phe Ile Lys		
645	650	

<210> 130

<211> 631
 <212> PRT
 <213> Homo sapiens

<400> 130

Met	Ala	Thr	Asn	Met	Ala	Pro	His	Asn	Leu	Arg	Glu	Ile	Cys	Asp	Ala	1	5	10	15
Ile	Val	Tyr	Met	Leu	Asp	Asn	Glu	Asn	Ala	Ser	Ile	Phe	Asp	Leu	Leu	20	25	30	
Lys	Ile	Val	Lys	Gly	Pro	Asp	Phe	Pro	Thr	Phe	Gly	Glu	Ile	Val	Tyr	35	40	45	
Asn	Asp	Asn	Leu	Ile	Lys	Ala	Tyr	Lys	Thr	Gly	Lys	Gly	Ser	Val	Val	50	55	60	
Ile	Arg	Ala	Arg	Tyr	His	Ile	Glu	Glu	Arg	Ala	Glu	Asp	Arg	Asn	Ala	65	70	75	80
Ile	Ile	Val	Thr	Glu	Ile	Pro	Tyr	Thr	Val	Asn	Lys	Ser	Ala	Leu	Leu	85	90	95	
Met	Lys	Val	Ala	Leu	Leu	Ala	Lys	Glu	Glu	Lys	Leu	Glu	Gly	Leu	Leu	100	105	110	
Asp	Ile	Arg	Asp	Glu	Ser	Asp	Arg	Glu	Gly	Ile	Arg	Ile	Val	Leu	Glu	115	120	125	
Val	Lys	Arg	Gly	Phe	Asp	Pro	His	Val	Ile	Met	Asn	Leu	Leu	Tyr	Glu	130	135	140	
Tyr	Thr	Glu	Phe	Lys	Lys	His	Phe	Ser	Ile	Asn	Asn	Leu	Ala	Leu	Val	145	150	155	160
Asn	Gly	Ile	Pro	Lys	Gln	Leu	Asn	Leu	Glu	Glu	Leu	Leu	Phe	Glu	Phe	165	170	175	
Ile	Glu	His	Arg	Lys	Asn	Ile	Ile	Glu	Arg	Arg	Ile	Glu	Phe	Asp	Leu	180	185	190	
Arg	Lys	Ala	Lys	Glu	Lys	Ala	His	Val	Leu	Glu	Gly	Leu	Asn	Ile	Ala	195	200	205	
Leu	Asn	Asn	Ile	Asp	Glu	Val	Ile	Lys	Ile	Ile	Lys	Ser	Ser	Lys	Leu	210	215	220	
Ala	Lys	Asp	Ala	Arg	Glu	Arg	Leu	Val	Ser	Asn	Phe	Gly	Leu	Ser	Glu	225	230	235	240
Ile	Gln	Ala	Asn	Ser	Val	Leu	Asp	Met	Arg	Leu	Gln	Lys	Leu	Thr	Ala	245	250	255	
Leu	Glu	Ile	Phe	Lys	Leu	Glu	Glu	Glu	Leu	Asn	Ile	Leu	Leu	Ser	Leu	260	265	270	
Ile	Lys	Asp	Tyr	Glu	Asp	Ile	Leu	Leu	Asn	Pro	Val	Arg	Ile	Ile	Asn	275	280	285	
Ile	Ile	Arg	Glu	Glu	Thr	Ile	Asn	Leu	Gly	Leu	Lys	Phe	Gly	Asp	Glu				

290	295	300
Arg Arg Thr Lys Ile Ile Tyr Asp Glu Glu Val Leu Lys Thr Ser Met 305 310 315 320		
Ser Asp Leu Met Gln Lys Glu Asn Ile Val Val Met Leu Thr Lys Lys 325 330 335		
Gly Phe Leu Lys Arg Leu Ser Gln Asn Glu Tyr Lys Leu Gln Gly Thr 340 345 350		
Gly Gly Lys Gly Leu Ser Ser Phe Asp Leu Asn Asp Gly Asp Glu Ile 355 360 365		
Val Ile Ala Leu Cys Val Asn Thr His Asp Tyr Leu Phe Met Ile Ser 370 375 380		
Asn Glu Gly Lys Leu Tyr Leu Ile Asn Ala Tyr Glu Ile Lys Asp Ser 385 390 395 400		
Ser Arg Ala Ser Lys Gly Gln Asn Ile Ser Glu Leu Ile Asn Leu Gly 405 410 415		
Asp Gln Glu Glu Ile Leu Thr Ile Lys Asn Ser Lys Asp Leu Thr Asp 420 425 430		
Asp Ala Tyr Leu Leu Leu Thr Thr Ala Ser Gly Lys Ile Ala Arg Phe 435 440 445		
Glu Ser Thr Asp Phe Lys Ala Val Lys Ser Arg Gly Val Ile Val Ile 450 455 460		
Lys Leu Asn Asp Lys Asp Phe Val Thr Ser Ala Glu Ile Val Phe Lys 465 470 475 480		
Asp Glu Lys Val Ile Cys Leu Ser Lys Lys Gly Ser Ala Phe Ile Phe 485 490 495		
Asn Ser Arg Asp Val Arg Leu Thr Asn Arg Gly Thr Gln Gly Val Cys 500 505 510		
Gly Met Lys Leu Lys Glu Gly Asp Leu Phe Val Lys Val Leu Ser Val 515 520 525		
Lys Glu Asn Pro Tyr Leu Leu Ile Val Ser Glu Asn Gly Tyr Gly Lys 530 535 540		
Arg Leu Asn Met Ser Lys Ile Ser Glu Leu Lys Arg Gly Ala Thr Gly 545 550 555 560		
Tyr Thr Ser Tyr Lys Lys Ser Asp Lys Lys Ala Gly Ser Val Val Asp 565 570 575		
Ala Ile Ala Val Ser Glu Asp Asp Glu Ile Leu Leu Val Ser Lys Arg 580 585 590		
Ser Lys Ala Leu Arg Thr Val Ala Gly Lys Val Ser Glu Gln Gly Lys 595 600 605		
Asp Ala Arg Gly Ile Gln Val Leu Phe Leu Asp Asn Asp Ser Leu Val		

610

615

620

Ser Val Ser Lys Phe Ile Lys
625 630

<210> 131
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 131
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gctactaata tggcacctca taatttaaga gaaatttggt atgccattgt ttacatgcta 120
gataatgaga atgcttctat atttgatttg cttaaaatag ttaaagggcc tgatttccca 180
acttttggag agattgttta taatgataat ttaattaaag catacaaaac tggcaaggga 240
agtgttggtta ttagggcaag atatcatatt gaagaaagag cagaagatag aaatgctata 300
attgtttacag aaatacctta tacggtaaat aaatctgcac ttcttatgaa agttgcgctt 360
ttagcaaaag aagaaaagct agaaggactt ttagatataa gagatgaatc tgatcgagaa 420
gggtattagga tagttcttga agttaaaaga ggatttgatc ctcatgttat tatgaatttg 480
ctttatgaat atactgaatt taaaaagcat ttagtataa ataatttagc ccttggtta 540
gggtattccca aacagttaaa tttagaagaa ttgttatttg aatttattga gcatagaaaa 600
aatattatcg aaagacgtat tgaatttgac ttgagaaagg caaaagagaa agcacatggt 660
cttgagggat taaatattgc tttaaataat atagatgagg ttattaagat tattaatatca 720
tctaaattag caaaagatgc aaggagagagg cttgtttcga attttggtct ttcagagatt 780
caggccaatt cagttcttga tatgagggtta caaaaactta cagcccttga gatttttaag 840
cttgaagagg agcttaatat actgttaagc ttaataaaaag attatgaaga tattctcttg 900
aatccagtaa ggattattaa tattataaga gaagaaaacta ttaatttagg tttgaaattt 960
ggcgatgaac gtcgaactaa aataatttat gatgaggagg ttttaaaaac tagtatgtcg 1020
gatttaatgc aaaaagaaaa tattgttggt atgcttacia agaaagggtt ctttaaaaga 1080
ctttcacaaa atgagtataa attgcaaggt acgggaggaa aaggactaag ttcgtttgat 1140
ctaaatgatg gagatgagat tgttattgct ttgtgtgtca atactcatga ttatttattt 1200
atgatttcaa atgaaggaaa gctttattta atcaatgctt atgaaataaa agattcttca 1260
agagcttcaa aaggtcagaa tattagttag cttattaatt taggagatca agaagaaata 1320
ttaactatta agaatagtaa agatttaact gatgatgctt atttattgct tacaactgca 1380
agtggaaaga tagctagatt cgaatctaca gattttaaag cagtaaagtc acgagggtgt 1440
attgttatta aactgaatga taaagatttt gttacaagtg cagagattgt ttttaaggat 1500
gaaaaagtaa tttgtctttc taaaaagggt agtgcattta tatttaattc aagggtatgt 1560
aggcttacta atagagggtac ccaagggtgt tgtggaatga aattaaaaga aggtgatttg 1620
tttgttaaag ttttatcggt taaagaaaat ccttatcttt tgattgtttc tgaaaatggg 1680
tatggaaaaa gggtaaacat gtctaaaata tctgagctta aaagaggagc cactgggtat 1740
actagttata aaaaatctga taaaaaagcg ggtagtgttg ttgatgctat agcagtttca 1800
gaggatgatg aaatcttgct tgtaagtaaa cgttcaaaag cttaagaac agtagctgga 1860
aaagtatctg aacaaggcaa agatgctaga ggaattcaag tattatttct tgataatgac 1920
agcttggttt ctgtttcaaa atttatttaa taa 1953

<210> 132
<211> 1896
<212> DNA
<213> Homo sapiens

<400> 132
atggctacta atatggcacc tcataattta agagaaattt gtgatgccat tgtttacatg 60
ctagataatg agaatgcttc tatatttgat ttgcttaaaa tagttaaagg gcctgatttc 120
ccaacttttg gagagattgt ttataatgat aatttaatta aagcatacaa aactggcaag 180
ggaagtgttg ttattagggc aagatatcat attgaagaaa gagcagaaga tagaaatgct 240
ataattgtta cagaaatacc ttatacggta aataaatctg cacttcttat gaaagttgct 300
cttttagcaa aagaagaaaa gctagaagga cttttagata taagagatga atctgatcga 360
gaaggattta ggatagttct tgaagttaaa agaggatttg atcctcatgt tattatgaat 420
ttgcttttatg aatatactga atttaaaaag cattttagta taaataattt agcccttggt 480
aatggtattc ccaaacagtt aaatttagaa gaattgttat ttgaatttat tgagcataga 540

aaaaatatta tcgaaagacg tattgaattt gacttgagaa aggcaaaaga gaaagcacat 600
 gttcttgagg gattaaatat tgctttaaat aatatagatg aggttattaa gattattaaa 660
 tcatctaaat tagcaaaaga tgcaaggag aggcttggtt cgaattttgg tctttcagag 720
 attcaggcca attcagttct tgatatgagg ttacaaaaac ttacagccct tgagattttt 780
 aagcttgaag aggagcttaa tatactgtta agcttaataa aagattatga agatattctc 840
 ttgaatccag taaggattat taatattata agagaagaaa ctattaattt aggtttgaaa 900
 tttggcgatg aacgtcgaac taaaataatt tatgatgagg aggtttttaa aactagtatg 960
 tcggatttaa tgcaaaaga aaatattgtt gttatgctta caaagaaagg tttcctttaa 1020
 agactttcac aaaatgagta taaattgcaa ggtacgggag gaaaaggact aagttcgttt 1080
 gatctaaatg atggagatga gattgttatt gctttgtgtg tcaataactca tgattattta 1140
 tttatgattt caaatgaagg aaagctttat ttaatcaatg cttatgaaat aaaagattct 1200
 tcaagagctt caaaagggtca gaattattag gagcttatta atttaggaga tcaagaagaa 1260
 atattaacta ttaagaatag taaagattta actgatgatg cttattttatt gcttacaact 1320
 gcaagtggaa agatagctag attcgaatct acagatttta aagcagtaaa gtcacgaggt 1380
 gttattgtta ttaaactgaa tgataaagat tttgttacia gtgcagagat tgtttttaag 1440
 gatgaaaaag taatttgtct ttctaaaaag ggtagtgcac ttatatttaa ttcaagggat 1500
 gttaggctta ctaatagagg tacccaagggt gtttgtggaa tgaaattaaa agaagggtgat 1560
 ttgtttgtta aagttttatc gggttaaagaa aatccttatc ttttgattgt ttctgaaaaat 1620
 ggggtatggaa aaagggttaa catgtctaaa atatctgagc ttaaaagagg agccactggt 1680
 tatactagtt ataaaaaatc tgataaaaaa gcgggtagtg ttgttgatgc tatagcagtt 1740
 tcagaggatg atgaaatctt gcttgtaagt aaacgttcaa aagctttaag aacagtagct 1800
 ggaaaagtat ctgaacaagg caaagatgct agaggaattc aagtattatt tcttgataat 1860
 gacagcttgg tttctgtttc aaaatttatt aaataa 1896

<210> 133
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 133
 Met Phe Ala Leu Ile Arg Lys Ile Phe Met Ile Tyr Phe Leu Cys Ile
 1 5 10 15
 Thr Leu Ala Gly Phe Ala Met Ile Phe Ile Asp Ser Lys Phe Thr Glu
 20 25 30
 Gln Pro Asn Val Lys Glu Asn Gln Ser Lys Ile Asn Gln His Thr Ile
 35 40 45
 Glu Pro Asn Leu Ile Met Phe Thr Ser Ser Ile Gly Gly Phe Leu Gly
 50 55 60
 Val Tyr Val Gly Ile Trp Ile Phe Asn Tyr Asp Lys Ser Asn Phe Tyr
 65 70 75 80
 Leu Asn Trp Gly Asn Leu Ile Ile Leu Ile Tyr Asn Ile Ala Leu Ile
 85 90 95
 Ile Thr Val Tyr Ser Lys Ser His Ser
 100 105

<210> 134
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 134
 Met Ile Phe Ile Asp Ser Lys Phe Thr Glu Gln Pro Asn Val Lys Glu
 1 5 10 15

Asn Gln Ser Lys Ile Asn Gln His Thr Ile Glu Pro Asn Leu Ile Met
 20 25 30
 Phe Thr Ser Ser Ile Gly Gly Phe Leu Gly Val Tyr Val Gly Ile Trp
 35 40 45
 Ile Phe Asn Tyr Asp Lys Ser Asn Phe Tyr Leu Asn Trp Gly Asn Leu
 50 55 60
 Ile Ile Leu Ile Tyr Asn Ile Ala Leu Ile Ile Thr Val Tyr Ser Lys
 65 70 75 80
 Ser His Ser

<210> 135
 <211> 318
 <212> DNA
 <213> Homo sapiens

<400> 135
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 tttgccatga tttttattga cagcaaattt accgaacagc ctaatgttaa agaaaatcaa 120
 agcaaaatta atcaacatac aattgaaccc aatttaatac tggttacatc ttctatagga 180
 ggatttttag gtgtttatgt tggaatttgg atctttaact atgacaaaag caatttttac 240
 ctaaattggg gaaatttaata aatattaata tacaacatag ccctaattat cactgtatac 300
 tcaaaatcac atagtttag 318

<210> 136
 <211> 252
 <212> DNA
 <213> Homo sapiens

<400> 136
 atgatttttta ttgacagcaa atttaccgaa cagcctaattg ttaaagaaaa tcaaagcaaa 60
 attaatacaac atacaattga acccaattta atcatgttta catcttctat aggaggattt 120
 ttaggtgttt atgttgggaat ttggatcttt aactatgaca aaagcaattt ttacctaaat 180
 tggggaaatt taataatatt aatatacaac atagccctaa ttatcactgt atactcaaaa 240
 tcacatagtt ag 252

<210> 137
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 137
 Met Lys Lys Thr Pro Asn Thr Cys Ile Phe Leu Thr Leu Leu Ile Ile
 1 5 10 15
 Ser Asn Leu Asn Ala Leu Ala Asn Glu Gly Asn Thr Asn Glu Lys
 20 25 30
 Asn Asp Gln Pro Lys Gln Ile Ser Asn Phe Phe Ser Pro Glu Arg Gly
 35 40 45
 Phe Ile Tyr Ser Thr Gly Ile Gly Ile Gly Val Gly Phe Phe Leu Asn
 50 55 60
 Ser Asn Ile Lys His Leu Ile Phe Arg Pro Tyr Tyr Thr Phe Ser Asn
 65 70 75 80

Asn Thr Phe Asp Phe Leu Ile Val Ala Met Ile Leu Thr Arg Glu Ser
 85 90 95
 Leu Asn Ile Pro Lys Lys Met Gln Tyr Phe Lys Ser Tyr Ile Gly Gly
 100 105 110
 Gly Ile Asn Trp His Ile Ala Asn Leu Ile Lys Lys Thr Lys Tyr Phe
 115 120 125
 Ser Ala Thr Ile Gly Ile Gly Gly Arg Phe Tyr Leu Ser Thr Asn Phe
 130 135 140
 Ile Glu Asp Ile Arg Phe Tyr Glu Lys Leu Pro Tyr Val Ile Glu Pro
 145 150 155 160
 Tyr Met Phe Ile Glu Ile Ser Ser Lys Lys Ala Ile Pro Leu Met Gly
 165 170 175
 Leu Asp Phe Lys Ile Asp Phe Leu Phe Leu Asp Thr Phe Asn Ile Ser
 180 185 190
 Phe Asn Phe Thr Ile Arg Tyr Asn Phe Lys Asp Lys Asn Glu Met Glu
 195 200 205

Thr

<210> 138
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 138
 Asn Glu Glu Gly Asn Thr Asn Glu Lys Asn Asp Gln Pro Lys Gln Ile
 1 5 10 15
 Ser Asn Phe Phe Ser Pro Glu Arg Gly Phe Ile Tyr Ser Thr Gly Ile
 20 25 30
 Gly Ile Gly Val Gly Phe Phe Leu Asn Ser Asn Ile Lys His Leu Ile
 35 40 45
 Phe Arg Pro Tyr Tyr Thr Phe Ser Asn Asn Thr Phe Asp Phe Leu Ile
 50 55 60
 Val Ala Met Ile Leu Thr Arg Glu Ser Leu Asn Ile Pro Lys Lys Met
 65 70 75 80
 Gln Tyr Phe Lys Ser Tyr Ile Gly Gly Gly Ile Asn Trp His Ile Ala
 85 90 95
 Asn Leu Ile Lys Lys Thr Lys Tyr Phe Ser Ala Thr Ile Gly Ile Gly
 100 105 110
 Gly Arg Phe Tyr Leu Ser Thr Asn Phe Ile Glu Asp Ile Arg Phe Tyr
 115 120 125
 Glu Lys Leu Pro Tyr Val Ile Glu Pro Tyr Met Phe Ile Glu Ile Ser
 130 135 140

Ser Lys Lys Ala Ile Pro Leu Met Gly Leu Asp Phe Lys Ile Asp Phe
 145 150 155 160

Leu Phe Leu Asp Thr Phe Asn Ile Ser Phe Asn Phe Thr Ile Arg Tyr
 165 170 175

Asn Phe Lys Asp Lys Asn Glu Met Glu Thr
 180 185

<210> 139
 <211> 630
 <212> DNA
 <213> Homo sapiens

<400> 139
 atgaaaaaaa ctccaaacac ttgtattttc ttaacattgc ttatcatttc caattttaa 60
 gcacttgcaa atgaagaagg caataactaat gaaaaaaatg atcaacccaa acaaattctct 120
 aattttttta gccagaaaag aggggttcata tattcaacag gaattgggat tggagttgga 180
 ttttttctaa attcaaatat taaacacctt atcttttagac cttattatac attctctaata 240
 aatacttttg attttttaaat cgttgctatg atattaacaa gggaaagcct taatatcccc 300
 aaaaaaatgc aatactttta atcttatatt ggaggaggaa taaactggca cattgcaaac 360
 ttaattaaaa aaacaaaata tttttccgcc accattggca taggtgggtcg tttttacct 420
 tctacaaact ttatagaaga cattcgattt tacgaaaaat tgccttatgt aatagagcct 480
 tatatgttta ttgaaatttc ttctaaaaag gcaattcctt taatgggggt agactttaaa 540
 attgattttt tatttttaga tacatttaac atttctttta attttactat tagatataat 600
 ttttaaggaca aaaacgagat ggaaacatga 630

<210> 140
 <211> 561
 <212> DNA
 <213> Homo sapiens

<400> 140
 aatgaagaag gcaatactaa tgaaaaaaat gatcaaccce aacaaatctc taattttttt 60
 agcccagaaa gagggttcat atattcaaca ggaattggga ttggagttgg attttttcta 120
 aattcaaata ttaaacacct tatcttttaga cttattata cattctctaa taatactttt 180
 gattttttta tcgttgctat gatattaaca agggaaagcc ttaatatccc caaaaaaatg 240
 caatacttta aatcttatat tggaggagga ataaactggc acattgcaaa cttaattaaa 300
 aaaacaaaat atttttccgc caccattggc ataggtgggt gttttttacct atctacaaac 360
 tttatagaag acattcgatt ttacgaaaaa ttgccttatg taatagagcc ttatatgttt 420
 attgaaattt cttctaaaaa ggcaattcct ttaatggggt tagactttta aattgatttt 480
 ttatttttag atacatttaa catttctttt aatttttact ttagatataa ttttaaggac 540
 aaaaacgaga tggaaacatg a 561

<210> 141
 <211> 328
 <212> PRT
 <213> Homo sapiens

<400> 141
 Met Ile Pro Val Val Ala Ser Gly Gly Ile Leu Ile-Ala Leu Ser Ile
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Ala Phe Val Gly Ile Gly Pro Asp Gly Pro Asn Phe Ala Glu His Pro
 20 25 30

Phe Tyr Lys Gln Ile Ala Asp Ile Gly Ser Ile Ala Phe Gly Met Met
 35 40 45

Leu Pro Val Leu Ala Gly Phe Ile Ala Met Ala Ile Ala Asp Lys Pro
 50 55 60
 Gly Leu Thr Pro Gly Leu Val Gly Gly Val Met Ser Gly Asn Val Lys
 65 70 75 80
 Ala Gly Phe Leu Gly Ala Ile Phe Ala Gly Phe Leu Ala Gly Tyr Val
 85 90 95
 Ala Arg Phe Leu Ala Arg Arg Ser Val Pro Glu Trp Leu Arg Pro Val
 100 105 110
 Met Pro Ile Phe Val Ile Pro Leu Ile Ser Thr Ile Ile Val Gly Phe
 115 120 125
 Phe Met Leu Tyr Phe Gly Val Tyr Ile Gly Lys Phe Met Gly Val Leu
 130 135 140
 Glu Ser Gly Leu Lys Ser Leu Gln Ser Asn Ser Glu Thr Phe Gly Val
 145 150 155 160
 Leu Gly Lys Ile Phe Leu Gly Leu Val Leu Gly Ser Met Ile Thr Val
 165 170 175
 Asp Met Gly Gly Pro Phe Asn Lys Val Ala Phe Leu Phe Gly Val Gly
 180 185 190
 Leu Ile Pro Gln Val Pro Glu Ile Met Gly Met Val Ala Ala Ala Ile
 195 200 205
 Pro Val Pro Pro Met Ala Met Gly Leu Ala Thr Phe Leu Ala Pro Lys
 210 215 220
 Leu Phe Glu Asn Glu Glu Lys Glu Ser Gly Lys Ile Ala Phe Leu Ile
 225 230 235 240
 Ser Phe Ile Gly Ile Ser Glu Gly Ala Ile Pro Phe Ala Ala Ser Asp
 245 250 255
 Pro Gly Arg Val Ile Pro Ser Ile Val Val Gly Gly Ala Val Ser Ser
 260 265 270
 Ile Ile Ala Ala Phe Leu Gly Val Ala Asn His Ala Pro His Gly Gly
 275 280 285
 Pro Ile Val Leu Pro Val Ile Asp Asn Lys Phe Gly Phe Ile Ile Ala
 290 295 300
 Ile Ala Val Gly Val Ala Val Ala Thr Ala Leu Val Ile Phe Leu Lys
 305 310 315 320
 Ser Leu Lys Leu Lys Glu Ser Glu
 325

<210> 142

<211> 267

<212> PRT

<213> Homo sapiens

<400> 142

Asp Lys Pro Gly Leu Thr Pro Gly Leu Val Gly Gly Val Met Ser Gly
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 Asn Val Lys Ala Gly Phe Leu Gly Ala Ile Phe Ala Gly Phe Leu Ala
 20 25 30
 Gly Tyr Val Ala Arg Phe Leu Ala Arg Arg Ser Val Pro Glu Trp Leu
 35 40 45
 Arg Pro Val Met Pro Ile Phe Val Ile Pro Leu Ile Ser Thr Ile Ile
 50 55 60
 Val Gly Phe Phe Met Leu Tyr Phe Gly Val Tyr Ile Gly Lys Phe Met
 65 70 75 80
 Gly Val Leu Glu Ser Gly Leu Lys Ser Leu Gln Ser Asn Ser Glu Thr
 85 90 95
 Phe Gly Val Leu Gly Lys Ile Phe Leu Gly Leu Val Leu Gly Ser Met
 100 105 110
 Ile Thr Val Asp Met Gly Gly Pro Phe Asn Lys Val Ala Phe Leu Phe
 115 120 125
 Gly Val Gly Leu Ile Pro Gln Val Pro Glu Ile Met Gly Met Val Ala
 130 135 140
 Ala Ala Ile Pro Val Pro Pro Met Ala Met Gly Leu Ala Thr Phe Leu
 145 150 155 160
 Ala Pro Lys Leu Phe Glu Asn Glu Glu Lys Glu Ser Gly Lys Ile Ala
 165 170 175
 Phe Leu Ile Ser Phe Ile Gly Ile Ser Glu Gly Ala Ile Pro Phe Ala
 180 185 190
 Ala Ser Asp Pro Gly Arg Val Ile Pro Ser Ile Val Val Gly Gly Ala
 195 200 205
 Val Ser Ser Ile Ile Ala Ala Phe Leu Gly Val Ala Asn His Ala Pro
 210 215 220
 His Gly Gly Pro Ile Val Leu Pro Val Ile Asp Asn Lys Phe Gly Phe
 225 230 235 240
 Ile Ile Ala Ile Ala Val Gly Val Ala Val Ala Thr Ala Leu Val Ile
 245 250 255
 Phe Leu Lys Ser Leu Lys Leu Lys Glu Ser Glu
 260 265

<210> 143

<211> 987

<212> DNA

<213> Homo sapiens

<400> 143

atgattcctg ttgttgcaag tggaggaatt ttaattgctc ttagcattgc ttttgttggg 60
 attggacctg atgggcctaa ttttgctgag catccatttt ataagcagat tgcagatatt 120
 ggttctatag cttttgggat gatgttgccc gtgcttgctg gttttattgc aatggcaatt 180

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gctgataagc ctgggtcttac ccccggtctt gttgggtggag taatgtctgg gaatgtaaaa 240
gcaggtttct tgggcgcaat atttgcgggc tttcttgtag gttatgttgc aagggttttta 300
gcaagaagat ctgttcctga gtggttaaga cctgtaatgc ctatatttgc aattccgcta 360
ataagcacca ttattgtcgg cttttttatg ctgtattttg gtgtttatat tggaaaattt 420
atgggggtgc ttgagagtgg gcttaaactt ttacagagta attcggaaac ttttggcggtg 480
ttgggtaaaa ttttcttagg cttagtacta ggttcaatga ttactgttga tatgggcgga 540
ccttttaata aagtggcatt tctttttggt gtagggctaa ttcctcaagt gccagaaata 600
atgggaatgg tagcagcagc aattcctggt cctcctatgg ctatggggct tgcaaccttt 660
ttagcaccta aattgtttga aaatgaagaa aaagaatctg gtaaaatagc ctttttaatt 720
tcatttattg gtattagcga aggagctatt ctttttgctg ctagtgatcc cggacgggta 780
atcccttcga tagtggtagg gggagctgta tcaagcatta ttgccgcttt tttaggcggt 840
gctaatacatg ctccacacgg aggaccaata gtacttctg ttattgataa taaatttggtg 900
tttattattg caattgctgt tggagtgtcg gttgcaacag ctttggtaat ttttttgaaa 960
tctttaaaat taaaggaatc tgaatga
987

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<210> 144

<211> 804

<212> DNA

<213> Homo sapiens

<400> 144

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agaagatctg ttcctgagtg gttaagacct gtaatgccta tatttgtaat tccgctaata 180
agcaccatta ttgtcggcct ttttatgctg tattttgggt tttatattgg aaaatttatg 240
ggggtgcttg agagtgggct taaatcttta cagagtaatt cggaaacttt tggcggtgtg 300
ggtaaaattt tcttaggctt agtactaggt tcaatgatta ctgttgatat gggcggaact 360
tttaataaag tggcatttct ttttggtgta gggctaattc ctcaagtgcc agaaataatg 420
ggaatggtag cagcagcaat tctgttcct cctatggcta tggggcttgc aaccttttta 480
gcacctaaat tgtttgaaaa tgaagaaaaa gaatctggta aaatagcctt tttaatattca 540
tttattggta tttagcgaag agctattcct tttgctgcta gtgatcccg acgggtaatc 600
ccttcgatag tggtaggggg agctgtatca agcattattg ccgctttttt aggcgttgct 660
aatcatgctc cacacggagg accaatagta cttcctgtta ttgataataa atttgggttt 720
attattgcaa ttgctgttgg agttgcgggt gcaacagctt tggaattttt tttgaaatct 780
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804

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<210> 145

<211> 203

<212> PRT

<213> Homo sapiens

<400> 145

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Met Ile Lys Ile Phe Lys Lys Ile Tyr Ile Leu Thr Leu Val Leu Gly
 1             5             10            15

Met Ala His Leu Ser Phe Ala Ser Asp Asn Tyr Met Val Arg Cys Ser
          20             25             30

Lys Glu Glu Asp Ser Thr Thr Cys Ile Ala Lys Leu Lys Glu Ile Lys
          35             40            45

Glu Lys Lys Asn Tyr Asp Leu Phe Ser Met Gly Ile Gly Ile Gly Asp
          50             55            60

Pro Ile Ala Asn Ile Met Ile Thr Ile Pro Tyr Ile Asn Ile Asp Phe
          65             70            75            80

Gly Tyr Gly Gly Phe Ile Gly Leu Lys Ser Asn Asn Phe Glu Asn Tyr
          85             90            95

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Leu Asn Gly Gly Ile Asp Val Ile Phe Lys Lys Gln Ile Gly Gln Tyr
 100 105 110
 Met Lys Ile Gly Gly Gly Ile Gly Ile Gly Ala Asp Trp Ser Lys Thr
 115 120 125
 Ser Leu Ile Pro Pro Asn Glu Glu Glu Thr Asp Tyr Glu Arg Ile
 130 135 140
 Gly Ala Val Ile Arg Ile Pro Phe Ile Met Glu Tyr Asn Phe Ala Lys
 145 150 155 160
 Asn Leu Ser Ile Gly Phe Lys Ile Tyr Pro Ala Val Gly Pro Thr Ile
 165 170 175
 Leu Leu Thr Lys Pro Ser Ile Leu Phe Glu Gly Ile Lys Phe Asn Phe
 180 185 190
 Phe Gly Phe Gly Phe Ile Lys Phe Ala Phe Asn
 195 200

<210> 146
 <211> 179
 <212> PRT
 <213> Homo sapiens

<400> 146
 Asp Asn Tyr Met Val Arg Cys Ser Lys Glu Glu Asp Ser Thr Thr Cys
 1 5 10 15
 Ile Ala Lys Leu Lys Glu Ile Lys Glu Lys Lys Asn Tyr Asp Leu Phe
 20 25 30
 Ser Met Gly Ile Gly Ile Gly Asp Pro Ile Ala Asn Ile Met Ile Thr
 35 40 45
 Ile Pro Tyr Ile Asn Ile Asp Phe Gly Tyr Gly Gly Phe Ile Gly Leu
 50 55 60
 Lys Ser Asn Asn Phe Glu Asn Tyr Leu Asn Gly Gly Ile Asp Val Ile
 65 70 75 80
 Phe Lys Lys Gln Ile Gly Gln Tyr Met Lys Ile Gly Gly Gly Ile Gly
 85 90 95
 Ile Gly Ala Asp Trp Ser Lys Thr Ser Leu Ile Pro Pro Asn Glu Glu
 100 105 110
 Glu Glu Thr Asp Tyr Glu Arg Ile Gly Ala Val Ile Arg Ile Pro Phe
 115 120 125
 Ile Met Glu Tyr Asn Phe Ala Lys Asn Leu Ser Ile Gly Phe Lys Ile
 130 135 140
 Tyr Pro Ala Val Gly Pro Thr Ile Leu Leu Thr Lys Pro Ser Ile Leu
 145 150 155 160
 Phe Glu Gly Ile Lys Phe Asn Phe Phe Gly Phe Gly Phe Ile Lys Phe
 165 170 175

Ala Phe Asn

<210> 147
<211> 612
<212> DNA
<213> Homo sapiens

<400> 147
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tcttttgcac ctgacaatta tatgggtcaga tgcagcaagg aagaagattc aaccacctgt 120
atcgcaaagc ttaaagaaat aaaagaaaag aaaaattatg acttattttc aatgggcatt 180
ggaataggag atcctattgc aaatattatg attacaattc cttatataaa tattgatttt 240
ggatatggag gttttattgg ccttaagtca aacaattttg aaaattatct aaatgggtgga 300
atagacgtta tttttaaaaa gcaaattgga caatatatga aaattggcgg cggcattgga 360
ataggtgcgg attggtcaaa aacatccctt atacccccta atgaagaaga agaaactgat 420
tatgagagaa taggcgctgt tataagaatt ccttttataa tggaatataa ttttgcaaaa 480
aatttatcca taggattcaa aatttatcct gcagtagggc caacaatatt actaacaaaa 540
ccaagcattt tatttgaagg aattaaattc aatttttttg gatttggatt cataaaattt 600
gcatttaatt aa 612

<210> 148
<211> 540
<212> DNA
<213> Homo sapiens

<400> 148
gacaattata tggtcagatg cagcaaggaa gaagattcaa ccacctgtat cgcaaagctt 60
aaagaaataa aagaaaagaa aaattatgac ttattttcaa tgggcattgg aataggagat 120
cctattgcaa atattatgat tacaattcct tatataaata ttgattttgg atatggagggt 180
tttattggcc ttaagtcaaa caattttgaa aattatctaa atgggtggaat agacgttatt 240
tttaaaaagc aaattggaca atatatgaaa attggcggcg gcattggaat aggtgcggat 300
tgggtcaaaaa catcccttat accccctaata gaagaagaag aaactgatta tgagagaata 360
ggcgctgtta taagaattcc ttttataatg gaatataatt ttgcaaaaaa tttatccata 420
ggattcaaaa tttatcctgc agtagggcca acaatattac taacaaaacc aagcatttta 480
tttgaaggaa ttaaattcaa tttttttgga tttggattca taaaatttgc atttaattaa 540

<210> 149
<211> 203
<212> PRT
<213> Homo sapiens

<400> 149
Met Arg Met Leu Leu Ala Thr Ile Ile Leu Ile Leu Thr Thr Gly Leu
1 5 10 15
Leu Ala Ala Gln Ser Lys Ser Lys Ser Met Thr Glu Asp Asp Phe Asp
20 25 30
Phe Asp Lys Leu Leu Ala Lys Glu Glu Ser Val Arg Arg Leu Phe Gly
35 40 45
Ile Gly Phe Gly Val Gly Tyr Pro Leu Ala Asn Ile Thr Ile Ser Val
50 55 60
Pro Tyr Val Asp Ile Asp Leu Gly Tyr Gly Gly Phe Val Gly Leu Lys
65 70 75 80
Pro Asn Asn Phe Leu Pro Tyr Val Val Met Gly Val Asp Leu Leu Phe
85 90 95

Lys Asp Glu Ile His Lys Asn Thr Met Ile Ser Gly Gly Ile Gly Ile
 100 105 110
 Gly Ala Asp Trp Ser Lys Gly Ser Pro Glu Lys Ser Asn Glu Lys Leu
 115 120 125
 Glu Glu Glu Glu Glu Asn Glu Ala Gln Gln Val Ala Ser Leu Gln Asn
 130 135 140
 Arg Ile Gly Val Val Ile Arg Leu Pro Leu Val Ile Glu Tyr Ser Phe
 145 150 155 160
 Leu Lys Asn Ile Val Ile Gly Phe Lys Ala Val Ala Thr Ile Gly Thr
 165 170 175
 Thr Met Leu Leu Gly Ser Pro Met Ser Phe Glu Gly Ala Arg Phe Asn
 180 185 190
 Phe Leu Gly Thr Gly Phe Ile Lys Ile Tyr Ile
 195 200

<210> 150
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 150
 Gln Ser Lys Ser Lys Ser Met Thr Glu Asp Asp Phe Asp Phe Asp Lys
 1 5 10 15
 Leu Leu Ala Lys Glu Glu Ser Val Arg Arg Leu Phe Gly Ile Gly Phe
 20 25 30
 Gly Val Gly Tyr Pro Leu Ala Asn Ile Thr Ile Ser Val Pro Tyr Val
 35 40 45
 Asp Ile Asp Leu Gly Tyr Gly Gly Phe Val Gly Leu Lys Pro Asn Asn
 50 55 60
 Phe Leu Pro Tyr Val Val Met Gly Val Asp Leu Leu Phe Lys Asp Glu
 65 70 75 80
 Ile His Lys Asn Thr Met Ile Ser Gly Gly Ile Gly Ile Gly Ala Asp
 85 90 95
 Trp Ser Lys Gly Ser Pro Glu Lys Ser Asn Glu Lys Leu Glu Glu Glu
 100 105 110
 Glu Glu Asn Glu Ala Gln Gln Val Ala Ser Leu Gln Asn Arg Ile Gly
 115 120 125
 Val Val Ile Arg Leu Pro Leu Val Ile Glu Tyr Ser Phe Leu Lys Asn
 130 135 140
 Ile Val Ile Gly Phe Lys Ala Val Ala Thr Ile Gly Thr Thr Met Leu
 145 150 155 160
 Leu Gly Ser Pro Met Ser Phe Glu Gly Ala Arg Phe Asn Phe Leu Gly
 165 170 175

Thr Gly Phe Ile Lys Ile Tyr Ile
180

<210> 151
<211> 612
<212> DNA
<213> Homo sapiens

<400> 151
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tccaaaagca aaagtatgac tgaagatgac tttgattttg ataaacttct tgcaaaagaa 120
gagtctgtgc gccgttttatt tggcataggt tttggagttg gatatccact tgcaaacatt 180
acaatatctg ttccatatgt agacatagac cttgggtacg gaggattcgt agggtctaaa 240
cccaacaatt tcttgcccta tgttgtgatg ggtgtagatc ttctatttaa agatgaaata 300
cacaaaaaca ctatgatttc tggaggcatt ggaatagggt cagattgggtc aaaaggaagt 360
cctgaaaaat caaatgaaaa acttgaagaa gaggaagaaa atgaagcaca acaagtagct 420
tctcttcaaa atagaatagg ggttgtgata agattgcctt tggtaataga gtacagcttt 480
cttaaaaaata ttgtgattgg atttaaagct gttgctacta ttggaacaac tatgctactt 540
ggcagcccaa tgtcatttga aggagctaga tttaatttct taggcacagg ctttataaaa 600
atatatatat ag 612

<210> 152
<211> 555
<212> DNA
<213> Homo sapiens

<400> 152
caatccaaaa gcaaaagtat gactgaagat gactttgatt ttgataaact tcttgcaaaa 60
gaagagtctg tgcgccgttt atttggcata ggttttggag ttggatatcc acttgcaaac 120
attacaatat ctgttccata tgtagacata gaccttgggt acggaggatt cgtagggctt 180
aaacccaaca atttcttgcc ctatgttgtg atgggtgtag atcttctatt taaagatgaa 240
atacacaaaa acactatgat ttctggaggc attggaatag gtgcagattg gtcaaaagga 300
agtcctgaaa aatcaaatga aaaacttgaa gaagaggaag aaaatgaagc acaacaagta 360
gcttctcttc aaaatagaat aggggttgtg ataagattgc ctttggtaat agagtacagc 420
tttcttaaaa atattgtgat tggatttaaa gctgttgcta ctattggaac aactatgcta 480
cttggcagcc caatgtcatt tgaaggagct agatttaatt tcttaggcac aggctttata 540
aaaatatata tatag 555

<210> 153
<211> 400
<212> PRT
<213> Homo sapiens

<400> 153
Met Asn Ile Lys Ile Asn Phe Phe Phe Thr Leu Pro Ile Gly Ile Phe
1 5 10 15
Leu Gly Leu Phe Phe Pro Leu Gly Ile Tyr Ser Ser Leu Ser His Ala
20 25 30
Phe Ile Arg Leu Ser Tyr Leu Ser Leu Ile Pro Phe Leu Ile Phe Ser
35 40 45
Ile Pro Leu Gly Ile Glu Asn Ile Ile Glu Asn Lys Asn Phe Lys Lys
50 55 60
Leu Phe Gly Lys Thr Ile Tyr Tyr Gly Ile Leu Thr Asn Leu Ser Gly
65 70 75 80

116

<210> 154
 <211> 348
 <212> PRT
 <213> Homo sapiens

<400> 154

Ile	Glu	Asn	Ile	Ile	Glu	Asn	Lys	Asn	Phe	Lys	Lys	Leu	Phe	Gly	Lys	1	5	10	15
Thr	Ile	Tyr	Tyr	Gly	Ile	Leu	Thr	Asn	Leu	Ser	Gly	Val	Ala	Val	Ser	20	25	30	
Ile	Ile	Ala	Ala	Thr	Ile	Tyr	Leu	Pro	Gln	Arg	Ile	Pro	Ile	Leu	Glu	35	40	45	
Lys	Thr	Ile	Gln	Asn	Thr	Cys	Phe	Phe	Glu	Lys	Glu	Ala	Leu	Leu	Glu	50	55	60	
Thr	Phe	Phe	Pro	Lys	Asn	Ile	Phe	Lys	Ile	Phe	Thr	Ser	Ser	Asn	Pro	65	70	75	80
Asn	Leu	Leu	Ser	Ile	Tyr	Met	Ile	Ser	Ile	Ile	Ile	Gly	Thr	Ser	Phe	85	90	95	
Tyr	Tyr	Ala	Lys	Gln	Lys	Gly	Arg	Ile	Ala	Arg	Glu	Leu	Met	Leu	Ser	100	105	110	
Ala	Ser	Asn	Leu	Phe	Tyr	His	Ala	Asn	Gly	Phe	Ile	Val	Asn	Ile	Leu	115	120	125	
Asn	Ile	Gly	Ile	Ile	Phe	Ile	Thr	Ala	Asn	Tyr	Ala	Ala	Asn	Leu	Lys	130	135	140	
Asn	Phe	Lys	Asp	Tyr	Pro	Asn	Tyr	Thr	Asn	Ser	Ile	Thr	Phe	Phe	Leu	145	150	155	160
Ala	Trp	Thr	Ile	Ile	Ile	Leu	Phe	Val	Ile	Leu	Pro	Thr	Ile	Ser	Tyr	165	170	175	
Arg	Leu	Thr	Lys	Ser	Phe	Lys	Met	Ile	Tyr	Lys	Gly	Ile	Phe	Val	Ser	180	185	190	
Phe	Gln	Asn	Ile	Ile	Phe	Ser	Gly	Leu	Ala	Lys	Asp	Ser	Tyr	Ser	Pro	195	200	205	
Tyr	Val	Ile	Leu	Ile	Glu	Asp	Ile	Lys	Asn	Glu	Arg	Ile	Asn	Ile	Lys	210	215	220	
Lys	Ser	Ile	Ile	Ile	Asn	Ile	Pro	Leu	Ile	Asn	Phe	Val	Ser	Lys	Phe	225	230	235	240
Gly	Thr	Ile	Phe	Val	Ser	Val	Ile	Ser	Phe	Phe	Ile	Ile	Leu	Lys	Ser	245	250	255	
Tyr	Ser	Ser	Leu	Pro	Ile	Ser	Ile	Tyr	Glu	Ile	Ser	Tyr	Met	Ser	Thr	260	265	270	
Leu	Ser	Phe	Val	Phe	Val	Phe	Ala	Phe	Pro	His	Ile	Pro	Asn	Ser	Leu	275	280	285	

Ile Tyr Ile Ile Thr Met Leu Cys Ser Thr Tyr Thr Lys Gly Ile Glu
 290 295 300

Leu Asn Val Ser Asn Ile Thr Pro Met Leu Pro Ile Leu Ile Ser Leu
 305 310 315 320

Ala Leu Leu Ile Asp Phe Ala Phe Asn Ile Ala Ile Ile His Ile Ile
 325 330 335

Asn Phe Lys Glu Leu Lys Asp Gln Glu Lys Ile Asn
 340 345

<210> 155
 <211> 1203
 <212> DNA
 <213> Homo sapiens

<400> 155
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 ttccctcttg gaatttatag ctcccttatca catgctttta taagattatc atacttatct 120
 cttattccct ttttaatat ttcaattcca ttaggaattg aaaatattat tgaaaataaa 180
 aacttttaaaa agcttttttg taaaacaatt tattatggaa ttttaactaa cctatctgga 240
 gttgctgtat caataatagc tgcaacaata tatcttccgc aaagaattcc aatactagaa 300
 aaaacaatac aaaatacatg tttttttgaa aaagaagctt tactagaaac attctttcca 360
 aaaaatattt tcaaaatatt tacatctagc aatccaaatc tactaagcat ttacatgatt 420
 tcaataataa taggcacaag tttttattat gcaaaacaaa aaggcagaat agctagagaa 480
 ctgatgctaa gcgcattcaa tcttttttac catgcaaagtg gggtttattgt aaacatatta 540
 aatataggga tcattttttat aacagcaaat tacgctgcaa acttaaaaaa cttcaaagat 600
 tacccaaatt atacaaacag cataacattc tttttggcat ggacaattat aattttattc 660
 gtaatatgtc caacaattag ttatagatta acaaaaagtt ttaaaatgat atataaaggc 720
 atttttgtat cattttcaaaa cataatatat tcaggacttg caaaagattc ttattccctt 780
 tatgtgatat taatagaaga tattaaaaaa gaaagaataa atataaaaaa atccataatt 840
 ataaacatac ctttaataaaa ttttgatatc aaatttggca ctatttttgt tttagtaata 900
 tcatttttta taatttttaa atcatattc agcttaccct tttctattta tgaaataagc 960
 tatatgagca ctttatcatt tgtttttgtc ttgtcatttc ctcatatacc aaatagtta 1020
 atttatataa ttacaatgct ttgtctctaca tatacaaaag gaatagagct aaatgtttca 1080
 aacataacac caatgctgcc gatattaatc tctttggctt tactaatcga ctttgctttt 1140
 aacattgcaa tcattcatat aataaacttc aaagaattaa aagatcaaga aaaaattaat 1200
 taa 1203

<210> 156
 <211> 1047
 <212> DNA
 <213> Homo sapiens

<400> 156
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 ggaattttta ctaacctatc tggagttgct gtatcaataa tagctgcaac aatatatctt 120
 ccgcaaagaa ttccaatact agaaaaaaca atacaaaata catgtttttt tgaaaaagaa 180
 gctttactag aaacattctt tccaaaaaat attttcaaaa tatttacatc tagcaatcca 240
 aatctactaa gcattttacat gatttcaata ataataaggca caagttttta ttatgcaaaa 300
 caaaaaggca gaatagctag agaactgatg ctaagcgcac ccaatctttt ttaccatgca 360
 aatgggttta ttgtaaacat attaaatata gggatcattt ttataacagc aaattacgct 420
 gcaaaactta aaaacttcaa agattaccca aattatacaa acagcataac attctttttg 480
 gcatggacaa ttataatttt attcgtaata ttgccaacaa ttagttatag attaacaaaa 540
 agttttaaaa tgatatataa aggcattttt gtatcatttc aaaacataat attttcagga 600
 cttgcaaaag attcttattc cccttatgtg atattaatag aagatattaa aaacgaaaga 660
 ataaatataa aaaaatccat aattataaac atacctttaa taaattttgt atctaaattt 720
 ggcactattt ttgtttcagt aatatcattt tttataattt taaaatcata ttctagctta 780
 cccatttcta tttatgaaat aagctatatg agcactttat catttgtttt tgtctttgca 840

tttcttcata taccaaatag tttaatttat ataattacaa tgctttgctc tacatatata 900
aaaggaatag agctaaatgt ttcaaacata acaccaatgc tgccgatatt aatctctttg 960
gctttactaa tcgactttgc tttaacatt gcaatcattc atataataaa cttcaaagaa 1020
ttaaaagatc aagaaaaaat taattaa 1047

<210> 157
<211> 219
<212> PRT
<213> Homo sapiens

<400> 157
Met Lys Lys Glu Phe Ile Met Leu Leu Leu Leu Leu Gln Thr Ile Met
1 5 10 15
Asn Leu Asn Ser Ile Asn Thr Asn Thr Ser Thr Ser Ile Val Lys Glu
20 25 30
Leu Gln Lys Asn Leu Tyr Ile Phe Asn Ser Lys Glu Tyr Gln Lys Asp
35 40 45
Lys Asp Thr Leu Asn Glu Phe Ile Asn Ser Ile Asn Ile Asn Asp Lys
50 55 60
Glu Ile Leu Gln Ser Leu Glu Lys Ile Lys Asn Glu Leu Phe Ile Ile
65 70 75 80
Ser Val Phe Phe Asn Asn Lys Lys Gly Ile Leu Ile Ala Leu Asn Leu
85 90 95
Gly Ala Glu Ile Asn Phe Lys Tyr Lys Ile Ser Pro Ile Ser Ile Ser
100 105 110
Ile Ile Asn Asn Glu Phe Glu Ile Thr Lys Ile Leu Ile Asp Tyr Gly
115 120 125
Ile Ser Leu Asn Gln Ile Asp Asp Thr Gly Tyr Ser Pro Ile Phe Trp
130 135 140
Ala Ile Tyr Thr Asn Asn Glu Lys Ile Phe Glu Phe Leu Lys Glu Ser
145 150 155 160
Gly Ala Asp Leu Ser Phe Thr Leu Lys Asn Arg Lys Thr Pro Met Gln
165 170 175
Ala Ala Ile Glu Thr Glu Asn Ile Lys Leu Ile Lys Ser Leu Glu Lys
180 185 190
Lys Lys Ile Tyr Ile Asp Asp Asn Phe Lys Lys Lys Leu Lys Lys Leu
195 200 205
Lys Asn Lys Glu Ile Val Arg Ile Leu Val Lys
210 215

<210> 158
<211> 201
<212> PRT
<213> Homo sapiens

<400> 158
Asn Ser Ile Asn Thr Asn Thr Ser Thr Ser Ile Val Lys Glu Leu Gln

1	5	10	15
Lys Asn Leu Tyr Ile Phe Asn Ser Lys Glu Tyr Gln Lys Asp Lys Asp	20	25	30
Thr Leu Asn Glu Phe Ile Asn Ser Ile Asn Ile Asn Asp Lys Glu Ile	35	40	45
Leu Gln Ser Leu Glu Lys Ile Lys Asn Glu Leu Phe Ile Ile Ser Val	50	55	60
Phe Phe Asn Asn Lys Lys Gly Ile Leu Ile Ala Leu Asn Leu Gly Ala	65	70	75
Glu Ile Asn Phe Lys Tyr Lys Ile Ser Pro Ile Ser Ile Ser Ile Ile	85	90	95
Asn Asn Glu Phe Glu Ile Thr Lys Ile Leu Ile Asp Tyr Gly Ile Ser	100	105	110
Leu Asn Gln Ile Asp Asp Thr Gly Tyr Ser Pro Ile Phe Trp Ala Ile	115	120	125
Tyr Thr Asn Asn Glu Lys Ile Phe Glu Phe Leu Lys Glu Ser Gly Ala	130	135	140
Asp Leu Ser Phe Thr Leu Lys Asn Arg Lys Thr Pro Met Gln Ala Ala	145	150	155
Ile Glu Thr Glu Asn Ile Lys Leu Ile Lys Ser Leu Glu Lys Lys Lys	165	170	175
Ile Tyr Ile Asp Asp Asn Phe Lys Lys Lys Leu Lys Lys Leu Lys Asn	180	185	190
Lys Glu Ile Val Arg Ile Leu Val Lys	195	200	

<210> 159
 <211> 660
 <212> DNA
 <213> Homo sapiens

<400> 159
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 aatagcaaag aatatcaaaa agataaagac acttttaaag aatttataaa ttcaataaat 180
 ataaatgaca aagaaatctt acaaagttta gaaaaaatca aaaatgagct ttttataata 240
 tctgtttttt tcaacaataa aaaagggatt ttaattgcac taaatcttgg agcagaaata 300
 aacttttaaat ataaaatatc tccaatttca atttcaataa taaacaatga atttgaaatc 360
 acaaaaatat tgatagatta cggaataagc cttaatcaaa tagatgatac aggttattct 420
 ccaatatttt gggcaatata tactaataac gaaaaaatat ttgaattttt aaaagaaagc 480
 ggagctgatt taagtttcac acttaaaaat agaaaaaacac caatgcaagc cgcaatagaa 540
 acagaaaata taaaactaat taaatctctg gaaaaaagaaa aaatttacat tgacgacaat 600
 ttcaaaaaaa aacttaaaaa gcttaaaaac aaagaaatag ttcgaatttt agtaaaatag 660

<210> 160
 <211> 606
 <212> DNA
 <213> Homo sapiens

<400> 160
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atthttcaata gcaaagaata tcaaaaagat aaagacactt taaatgaatt tataaattca 120
ataaatataa atgacaaaga aatcttacia agtttagaaa aaatcaaaaa tgagcttttt 180
ataatatctg tttttttcaa caataaaaaa gggattttta ttgcactaaa tcttgagca 240
gaaataaaact ttaaataataa aatatctcca atttcaattt caataataaa caatgaattt 300
gaaatcacaa aaatattgat agattacgga ataagcctta atcaaataga tgatacaggt 360
tattctccaa ttttttgggc aatatatact aataacgaaa aaatatttga atthtttaaaa 420
gaaagcggag ctgattttaag tttcacactt aaaaatagaa aaacaccaat gcaagccgca 480
atagaaacag aaaatataaaa actaattaaa tctctggaaa agaaaaaaat ttacattgac 540
gacaatttca aaaaaaaaact taaaaagctt aaaaacaaag aaatagttcg aatttttagta 600
aatag 606

<210> 161
<211> 178
<212> PRT
<213> Homo sapiens

<400> 161
Met Thr Lys Asn Arg Ile Ile Trp Leu Leu Val Leu Met Val Ser Ser
1 5 10 15
Thr Phe Thr Ala Thr Ile Ile Ser Asn Tyr Gln Asn Leu Met Leu Ser
20 25 30
Leu Val Val Leu Ala Asn Phe Ile Pro Leu Leu Met Asp Thr Ser Gly
35 40 45
Asn Ala Gly Ser Gln Ala Ser Ala Leu Ile Ile Arg Glu Leu Ala Leu
50 55 60
Gly Thr Val Lys Val Lys Asp Phe Phe Lys Val Phe Leu Lys Glu Ile
65 70 75 80
Cys Val Ser Ile Leu Val Gly Ala Ile Leu Ala Ser Val Asn Phe Leu
85 90 95
Arg Ile Val Phe Phe Val Ala Pro His His Ser Asp Lys Leu Lys Ile
100 105 110
Ala Phe Val Val Ser Ser Cys Leu Met Val Ser Leu Thr Val Ala Lys
115 120 125
Ile Leu Gly Gly Leu Leu Pro Ile Val Ala Lys Leu Leu Lys Leu Asp
130 135 140
Pro Ala Leu Met Ala Gly Pro Leu Ile Thr Thr Ile Ala Asp Ala Ile
145 150 155 160
Thr Leu Ile Ala Tyr Phe Asn Ile Ala Lys Trp Val Leu Val Ser Tyr
165 170 175
Ala Val

<210> 162
<211> 163
<212> PRT
<213> Homo sapiens

<400> 162

Ser Thr Phe Thr Ala Thr Ile Ile Ser Asn Tyr Gln Asn Leu Met Leu
1 5 10 15

Ser Leu Val Val Leu Ala Asn Phe Ile Pro Leu Leu Met Asp Thr Ser
20 25 30

Gly Asn Ala Gly Ser Gln Ala Ser Ala Leu Ile Ile Arg Glu Leu Ala
35 40 45

Leu Gly Thr Val Lys Val Lys Asp Phe Phe Lys Val Phe Leu Lys Glu
50 55 60

Ile Cys Val Ser Ile Leu Val Gly Ala Ile Leu Ala Ser Val Asn Phe
65 70 75 80

Leu Arg Ile Val Phe Phe Val Ala Pro His His Ser Asp Lys Leu Lys
85 90 95

Ile Ala Phe Val Val Ser Ser Cys Leu Met Val Ser Leu Thr Val Ala
100 105 110

Lys Ile Leu Gly Gly Leu Leu Pro Ile Val Ala Lys Leu Leu Lys Leu
115 120 125

Asp Pro Ala Leu Met Ala Gly Pro Leu Ile Thr Thr Ile Ala Asp Ala
130 135 140

Ile Thr Leu Ile Ala Tyr Phe Asn Ile Ala Lys Trp Val Leu Val Ser
145 150 155 160

Tyr Ala Val

<210> 163

<211> 537

<212> DNA

<213> Homo sapiens

<400> 163

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acaattattt caaattatca aaattttaatg ttgtcctttag tggtttttagc taattttatt 120
ccccttttaa tggatacttc aggcaatgcc ggctctcagg catctgcgct aataattcgt 180
gagcttgctc ttggtactgt caaggtaaaa gatttttttta aagtgttttt aaaggaaata 240
tgtgttagca ttctagtggg agcaattcctt gctagtgtta attttttaag aattgtcctt 300
ttttagctc cacaccattc tgataagctg aaaatagctt ttgtagtctt atcttgcttg 360
atggtaagtt tgacagtagc aaagatattg ggaggtcttt taccattgt tgctaaactt 420
ttaaagttgg atccagcact tatggcaggc cttttaatca ctacaattgc agatgctatt 480
actttaatag cttatttttaa tatagcaaaa tgggttttag ttagctatgc tgtttaa 537

<210> 164

<211> 492

<212> DNA

<213> Homo sapiens

<400> 164

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gcgctaataa ttcgtgagct tgctcttggt actgtcaagg taaaagattt ttttaaagtg 180

ttttttaaagg aaatatgtgt tagcattcta gtgggagcaa ttcttgctag tgtaatttt 240
 ttaagaattg tcttttttgt agctccacac cattctgata agctgaaaat agcttttgta 300
 gtttcatctt gcttgatggt aagtttgaca gtagcaaaga tattgggagg tcttttaccc 360
 attgttgcta aacttttaaa gttggatcca gcacttatgg caggcccttt aatcactaca 420
 attgcagatg ctattacttt aatagcttat tttaatatag caaaatgggt tttagtttagc 480
 tatgctgttt aa 492

<210> 165

<211> 178

<212> PRT

<213> Homo sapiens

<400> 165

Met Thr Lys Asn Arg Ile Ile Trp Leu Leu Val Leu Met Val Ser Ser
 1 5 10 15

Thr Phe Thr Ala Thr Ile Ile Ser Asn Tyr Gln Asn Leu Met Leu Ser
 20 25 30

Leu Val Val Leu Ala Asn Phe Ile Pro Leu Leu Met Asp Thr Ser Gly
 35 40 45

Asn Ala Gly Ser Gln Ala Ser Ala Leu Ile Ile Arg Glu Leu Ala Leu
 50 55 60

Gly Thr Val Lys Val Lys Asp Phe Phe Lys Val Phe Leu Lys Glu Ile
 65 70 75 80

Cys Val Ser Ile Leu Val Gly Ala Ile Leu Ala Ser Val Asn Phe Leu
 85 90 95

Arg Ile Val Phe Phe Val Ala Pro His His Ser Asp Lys Leu Lys Ile
 100 105 110

Ala Phe Val Val Ser Ser Cys Leu Met Val Ser Leu Thr Val Ala Lys
 115 120 125

Ile Leu Gly Gly Leu Leu Pro Ile Val Ala Lys Leu Leu Lys Leu Asp
 130 135 140

Pro Ala Leu Met Ala Gly Pro Leu Ile Thr Thr Ile Ala Asp Ala Ile
 145 150 155 160

Thr Leu Ile Ala Tyr Phe Asn Ile Ala Lys Trp Val Leu Val Ser Tyr
 165 170 175

Ala Val

<210> 166

<211> 128

<212> PRT

<213> Homo sapiens

<400> 166

Gly Ser Gln Ala Ser Ala Leu Ile Ile Arg Glu Leu Ala Leu Gly Thr
 1 5 10 15

Val Lys Val Lys Asp Phe Phe Lys Val Phe Leu Lys Glu Ile Cys Val
 20 25 30

Ser Ile Leu Val Gly Ala Ile Leu Ala Ser Val Asn Phe Leu Arg Ile
35 40 45

Val Phe Phe Val Ala Pro His His Ser Asp Lys Leu Lys Ile Ala Phe
50 55 60

Val Val Ser Ser Cys Leu Met Val Ser Leu Thr Val Ala Lys Ile Leu
65 70 75 80

Gly Gly Leu Leu Pro Ile Val Ala Lys Leu Leu Lys Leu Asp Pro Ala
85 90 95

Leu Met Ala Gly Pro Leu Ile Thr Thr Ile Ala Asp Ala Ile Thr Leu
100 105 110

Ile Ala Tyr Phe Asn Ile Ala Lys Trp Val Leu Val Ser Tyr Ala Val
115 120 125

<210> 167
<211> 537
<212> DNA
<213> Homo sapiens

<400> 167
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acaattatatt caaattatca aaatttaatg ttgtcttttag tggtttttagc taattttatt 120
ccccttttaa tggatacttc aggcaatgcc ggctctcagg catctgcgct aataattcgt 180
gagcttgctc ttggtactgt caaggtaaaa gattttttta aagtgttttt aaaggaaata 240
tgtgttagca ttctagtggg agcaattcctt gctagtgtta attttttaag aattgtcttt 300
ttttagctc cacaccattc tgataagctg aaaatagctt ttgtagtttc atcttgcttg 360
atggtaagtt tgacagtagc aaagatatgt ggaggtcttt taccattgt tgctaaactt 420
ttaagttgg atccagcact tatggcaggc cctttaatca ctacaattgc agatgctatt 480
actttaatag cttattttta tatagcaaaa tgggttttag ttagctatgc tgtttaa 537

<210> 168
<211> 387
<212> DNA
<213> Homo sapiens

<400> 168
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gattttttta aagtgttttt aaaggaaata tgtgttagca ttctagtggg agcaattcctt 120
gctagtgtta attttttaag aattgtcttt tttgtagctc cacaccattc tgataagctg 180
aaaatagctt ttgtagtttc atcttgcttg atggtaagtt tgacagtagc aaagatatgt 240
ggaggtcttt taccattgt tgctaaactt ttaagttgg atccagcact tatggcaggc 300
cctttaatca ctacaattgc agatgctatt actttaatag cttattttta tatagcaaaa 360
tgggttttag ttagctatgc tgtttaa 387

<210> 169
<211> 373
<212> PRT
<213> Homo sapiens

<400> 169
Met Arg Ile Lys Asn Leu Ile Leu Ile Ala Ile Leu Leu Ile Ser Pro
1 5 10 15

Ser Cys Ser Thr Asn Lys Asn Ile Val Val Leu Thr Asp Asn Lys Thr
20 25 30

Ile Pro Phe Tyr Ile Asn Gln Phe Asn Ile Glu Asn Lys Ala Asn Phe
 35 40 45
 Ile Ile Lys Phe Arg Asn Asn Ile Asp Leu Gln Thr Ile Glu Lys Glu
 50 55 60
 Asn Ala Gln Ile Ile Ile Ser Lys Asn Ile Gly Asn Thr Asn Ile Ala
 65 70 75 80
 Asn His Phe Lys Ser Val Lys Ile Asn Tyr Asn Pro Asp Tyr Pro Ile
 85 90 95
 Leu Lys His Ile Phe Lys Gln Phe Asn Tyr Lys Ile Ile Pro Leu Gly
 100 105 110
 Phe Asp Ile Pro Ile Leu Ile Tyr Lys Asn Thr His His Ile Lys Lys
 115 120 125
 Tyr Ile Asn Thr Lys Tyr Leu Lys Glu Glu Tyr Glu Asn Phe Ile Lys
 130 135 140
 Asp Gly Lys Phe Phe Ile Ser Pro Tyr Val Ser Glu Asn Leu Phe Tyr
 145 150 155 160
 Val Ile Ser Gln Ile Asn Asn Val Arg Phe Ser Phe Glu Lys Asn Lys
 165 170 175
 Leu Asn Tyr Asn Glu Asn Gln Ile Leu Lys Met Leu Glu Tyr Phe Ser
 180 185 190
 Ser Phe Leu Asn Thr Lys Gln Met Asp Leu Gln Lys Asp Phe Phe Asn
 195 200 205
 Lys Tyr Gly Tyr Leu Lys Leu Asn Lys Ile Leu Leu Asn Lys Lys Ser
 210 215 220
 Leu Leu Ile Ala Gly Leu Ser Asp Ile Thr Phe Tyr Asn Ser Leu Ser
 225 230 235 240
 Glu Gln Glu Lys Ser Gln Ile Lys Phe Ser Tyr Leu Ile Asn Asp Asn
 245 250 255
 Asn Glu Ile Val Ile Ser Asn Pro Asn Phe Ile Gly Ile Leu Glu Thr
 260 265 270
 Ser Val Leu Thr Lys Lys Phe Ile Asn Trp Ile Leu Tyr Lys Lys Thr
 275 280 285
 Gln Lys Thr Leu Ile Gly Phe Asn Asn Gln Ser Gln Ser Asn Ile Cys
 290 295 300
 Phe Gly Phe Ala Asn Gly Phe Thr Pro Tyr Lys Glu Leu Asn Leu Lys
 305 310 315 320
 Ile Lys His Ser Ile Asp Gly Ile Ser Pro Phe Ile Ile Asp Glu Thr
 325 330 335
 Gln Ile Asn Ser His Ser Tyr Val Leu Ser Lys Lys Thr Ile Glu Lys
 340 345 350

Glu Asn Leu Leu Ile Asn Glu Trp Phe Phe Ser Lys Ala Asn Asn Leu
 355 360 365

Lys Lys Asn Lys Asn
 370

<210> 170

<211> 353

<212> PRT

<213> Homo sapiens

<400> 170

Asn Lys Asn Ile Val Val Leu Thr Asp Asn Lys Thr Ile Pro Phe Tyr
 1 5 10 15

Ile Asn Gln Phe Asn Ile Glu Asn Lys Ala Asn Phe Ile Ile Lys Phe
 20 25 30

Arg Asn Asn Ile Asp Leu Gln Thr Ile Glu Lys Glu Asn Ala Gln Ile
 35 40 45

Ile Ile Ser Lys Asn Ile Gly Asn Thr Asn Ile Ala Asn His Phe Lys
 50 55 60

Ser Val Lys Ile Asn Tyr Asn Pro Asp Tyr Pro Ile Leu Lys His Ile
 65 70 75 80

Phe Lys Gln Phe Asn Tyr Lys Ile Ile Pro Leu Gly Phe Asp Ile Pro
 85 90 95

Ile Leu Ile Tyr Lys Asn Thr His His Ile Lys Lys Tyr Ile Asn Thr
 100 105 110

Lys Tyr Leu Lys Glu Glu Tyr Glu Asn Phe Ile Lys Asp Gly Lys Phe
 115 120 125

Phe Ile Ser Pro Tyr Val Ser Glu Asn Leu Phe Tyr Val Ile Ser Gln
 130 135 140

Ile Asn Asn Val Arg Phe Ser Phe Glu Lys Asn Lys Leu Asn Tyr Asn
 145 150 155 160

Glu Asn Gln Ile Leu Lys Met Leu Glu Tyr Phe Ser Ser Phe Leu Asn
 165 170 175

Thr Lys Gln Met Asp Leu Gln Lys Asp Phe Phe Asn Lys Tyr Gly Tyr
 180 185 190

Leu Lys Leu Asn Lys Ile Leu Leu Asn Lys Lys Ser Leu Leu Ile Ala
 195 200 205

Gly Leu Ser Asp Ile Thr Phe Tyr Asn Ser Leu Ser Glu Gln Glu Lys
 210 215 220

Ser Gln Ile Lys Phe Ser Tyr Leu Ile Asn Asp Asn Asn Glu Ile Val
 225 230 235 240

Ile Ser Asn Pro Asn Phe Ile Gly Ile Leu Glu Thr Ser Val Leu Thr
 245 250 255

Lys Lys Phe Ile Asn Trp Ile Leu Tyr Lys Lys Thr Gln Lys Thr Leu
 260 265 270
 Ile Gly Phe Asn Asn Gln Ser Gln Ser Asn Ile Cys Phe Gly Phe Ala
 275 280 285
 Asn Gly Phe Thr Pro Tyr Lys Glu Leu Asn Leu Lys Ile Lys His Ser
 290 295 300
 Ile Asp Gly Ile Ser Pro Phe Ile Ile Asp Glu Thr Gln Ile Asn Ser
 305 310 315 320
 His Ser Tyr Val Leu Ser Lys Lys Thr Ile Glu Lys Glu Asn Leu Leu
 325 330 335
 Ile Asn Glu Trp Phe Phe Ser Lys Ala Asn Asn Leu Lys Lys Asn Lys
 340 345 350

Asn

<210> 171
 <211> 1122
 <212> DNA
 <213> Homo sapiens

<400> 171
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 aataagaaca tcgttggtact aactgacaat aaaacaatac cattttatat aaatcaattt 120
 aatatagaaa ataaagcaaa ttttataatt aagtttagaa ataattattga tctgcaaaca 180
 atagaaaaag aaaatgcaca aataattatt tctaaaaaca ttggtaacac aaatattgct 240
 aaccatttta aatctgtaaa aatcaattat aatccagatt atcctatctt aaagcatatt 300
 ttcaagcaat ttaactacaa aattattcca ttgggctttg acattcctat tttaatctat 360
 aaaaatacac atcatattaa aaaatacata aacactaaat atctaaaaga agaatacgaa 420
 aatttcatta aagatggaaa attttttata tcgccttatg tttctgaaaa tttattttat 480
 gtgatttctc aaataaataa tgtgagattt tcttttgaaa aaaataaatt aaattataat 540
 gagaatcaaa ttttaaaaat gctagaatat ttctcatcat ttttaaatatc aaaacaaatg 600
 gacttgcaaa aagatttctt taataaatac ggctacctaa agttaataaa aatattgctt 660
 aataaaaaat ctctttttaat agcaggattg agcgatataa ccttctacaa tagcttaagc 720
 gaacaagaga agtcacaaat aaaattttcc tatttaataa acgataacaa tgaaattggt 780
 atctcaaacc caaattttat tggcatttta gaaacatctg ttttaactaa aaaattttatc 840
 aactggatat tgtataaaaa aactcaaaaa accctaattg gatttaacaa tcaatcccaa 900
 tcaaatatat gttttggatt tgccaatggg tttaccctt acaaagaatt aaatttaaaa 960
 ataaaacatt caattgatgg aatatctcct tttattattg acgaaactca aatcaatagc 1020
 cattcctatg tattaagcaa aaaaacaatt gaaaaagaaa acttactaat aaatgaatgg 1080
 tttttctcta aagctaataa tctaaaaaaa aataaaaatt aa 1122

<210> 172
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 172
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 aatatagaaa ataaagcaaa ttttataatt aagtttagaa ataattattga tctgcaaaca 120
 atagaaaaag aaaatgcaca aataattatt tctaaaaaca ttggtaacac aaatattgct 180
 aaccatttta aatctgtaaa aatcaattat aatccagatt atcctatctt aaagcatatt 240
 ttcaagcaat ttaactacaa aattattcca ttgggctttg acattcctat tttaatctat 300
 aaaaatacac atcatattaa aaaatacata aacactaaat atctaaaaga agaatacgaa 360

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aatttcatta aagatggaaa attttttata tgccttatg tttctgaaaa tttattttat 420
gtgatttctc aaataaataa tgtgagattt tcttttgaaa aaaataaatt aaattataat 480
gagaatcaaa ttttaaaaaat gctagaatat ttctcatcat ttttaaatac aaaacaaatg 540
gacttgcaaa aagattttctt taataaatac ggctacctaa agttaataa aatattgctt 600
aataaaaaat ctcttttaat agcaggattg agcgatataa ccttctacaa tagcttaagc 660
gaacaagaga agtcacaaat aaaattttcc tatttaataa acgataacaa tgaaattggt 720
atctcaaacc caaattttat tggcatttta gaaacatctg ttttaactaa aaaatttatc 780
aactggatat tgtataaaaa aactcaaaaa accctaattg gatttaacaa tcaatcccaa 840
tcaaatatat gttttggatt tgccaatggg tttaccctt acaaagaatt aaatttaaaa 900
ataaaacatt caattgatgg aatatctcct ttattattg acgaaactca aatcaatagc 960
cattcctatg tattaagcaa aaaaacaatt gaaaaagaaa acttactaat aaatgaatgg 1020
tttttctcta aagctaataa tctaaaaaaa aataaaaaatt aa 1062

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<210> 173

<211> 216

<212> PRT

<213> Homo sapiens

<400> 173

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Met Ile Lys Thr Ile Leu Leu Leu Val Leu Tyr Pro Val Val Val Phe
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Ser Gln Ile Ser Ala Asn Gln Tyr Phe Glu Gly Ile Tyr Ala Lys Tyr
      20                      25                      30

Gln Asn Ile Glu Asp Met Gln Ala Thr Ile Asn Phe Thr Leu Lys Gly
      35                      40                      45

Leu Lys Gln Thr Gly Val Leu Leu Tyr Lys Phe Pro Asp Lys Phe Ile
      50                      55                      60

Ile Asn Leu Asp Ser Asn Asn Gln Val Phe Val Ser Asp Gly Glu Phe
      65                      70                      75                      80

Leu Thr Val Tyr Val Pro Ser Leu Gly Thr Ser Phe Asn Gln Gln Leu
      85                      90                      95

Leu Lys Gly Ser Ser Gly Gly Gly Leu Met Lys Val Leu Asn Ser Glu
      100                     105                     110

Tyr Ser Val Ser Tyr Thr Asn Ser Pro Asn Leu Glu Asp Leu Asp Ser
      115                     120                     125

Ser Glu Pro Gly Lys Tyr Ile Lys Leu Thr Phe Ser Arg Lys Leu Tyr
      130                     135                     140

Lys Gly Ala Ala Thr Ile Asn Ser Phe Ile Ile Ala Phe Ala Pro Asp
      145                     150                     155                     160

Gly Ile Ile Arg Arg Ile Thr Ala Phe Pro Thr Ser Gly Gly Arg Glu
      165                     170                     175

Ile Val Ile Asp Leu Thr Ala Val Lys Phe Asn Val Gly Ile Leu Asp
      180                     185                     190

Ser Lys Phe Lys Tyr Asp Pro Pro Lys Ser Ser Asn Lys Val Asp Asn
      195                     200                     205

Phe Leu Tyr Asp Ile Lys Lys Asn
      210                     215

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<210> 174
 <211> 199
 <212> PRT
 <213> Homo sapiens

<400> 174
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 1 5 10 15
 Asn Ile Glu Asp Met Gln Ala Thr Ile Asn Phe Thr Leu Lys Gly Leu
 20 25 30
 Lys Gln Thr Gly Val Leu Leu Tyr Lys Phe Pro Asp Lys Phe Ile Ile
 35 40 45
 Asn Leu Asp Ser Asn Asn Gln Val Phe Val Ser Asp Gly Glu Phe Leu
 50 55 60
 Thr Val Tyr Val Pro Ser Leu Gly Thr Ser Phe Asn Gln Gln Leu Leu
 65 70 75 80
 Lys Gly Ser Ser Gly Gly Gly Leu Met Lys Val Leu Asn Ser Glu Tyr
 85 90 95
 Ser Val Ser Tyr Thr Asn Ser Pro Asn Leu Glu Asp Leu Asp Ser Ser
 100 105 110
 Glu Pro Gly Lys Tyr Ile Lys Leu Thr Phe Ser Arg Lys Leu Tyr Lys
 115 120 125
 Gly Ala Ala Thr Ile Asn Ser Phe Ile Ile Ala Phe Ala Pro Asp Gly
 130 135 140
 Ile Ile Arg Arg Ile Thr Ala Phe Pro Thr Ser Gly Gly Arg Glu Ile
 145 150 155 160
 Val Ile Asp Leu Thr Ala Val Lys Phe Asn Val Gly Ile Leu Asp Ser
 165 170 175
 Lys Phe Lys Tyr Asp Pro Pro Lys Ser Ser Asn Lys Val Asp Asn Phe
 180 185 190
 Leu Tyr Asp Ile Lys Lys Asn
 195

<210> 175
 <211> 651
 <212> DNA
 <213> Homo sapiens

<400> 175
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 acaattaatt ttacttttaa ggggttaaag caaacagggtg ttttgcttta taagtttcca 180
 gacaagttta ttatcaattt agattcaa atcaagttt ttgtaagtga tgggtgaattt 240
 ttgacagttt atgttccatc tcttgggact tcttttaatc agcaattatt aaagggtagt 300
 agtgggggag gtcttatgaa agttttaaat agtgagtata gcgtatctta taccaattct 360
 ccaaatttag aagatctcga ttcattctgag cctggaaaat atattaaatt aaccttttct 420
 agaaagcttt acaagggggc tgctactatt aattctttta ttattgcttt tgctccggat 480

ggaataatta gaagaattac tgcttttctt actagtgggtg ggcgcgaaat agttattgat 540
 ttgactgctg tgaagtttaa tgttggaatt cttgatagca aatttaaata tgatcctcca 600
 aaatcttcaa ataaggtaga taatttttta tatgatatta aaaaaatta a 651

<210> 176
 <211> 600
 <212> DNA
 <213> Homo sapiens

<400> 176
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 atgcaagcaa caattaattt tacttttaaag gggttaaagc aaacaggtgt tttgctttat 120
 aagtttccag acaagtttat tatcaattta gattcaaata atcaagtttt tgtaagtgtat 180
 ggtgaatttt tgacagttta tgttccatct cttgggactt cttttaatca gcaattatta 240
 aagggtagta gtgggggagg tcttatgaaa gttttaaata gtgagtatag cgtatcttat 300
 accaattctc caaatttaga agatctcgat tcatctgagc ctggaaaata tattaaatta 360
 accttttcta gaaagcttta caagggggct gctactatta attcttttat tattgctttt 420
 gctccggatg gaataattag aagaattact gcttttccta ctagtgggtgg ggcgcgaaata 480
 gttattgatt tgactgctgt gaagtttaat gttggaattc ttgatagcaa atttaaatat 540
 gatcctccaa aatcttcaaa taaggtagat aattttttat atgatattaa aaaaaattaa 600

<210> 177
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Lys Glu Arg Cys Leu Tyr Leu Leu Val Phe Val Ala Leu Cys Val
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 20 25 30
 Leu Asn Glu Phe Leu Glu Val Ser Thr Arg Lys Asp Asn Leu Glu Pro
 35 40 45
 Met Val Asp Ser Asn Arg Ile Leu Leu Phe Tyr Pro Pro Lys Lys Glu
 50 55 60
 Ile Arg Lys Ile Phe Ala Ala Phe Asp Phe Asp Gln Tyr Ser Lys Lys
 65 70 75 80
 Tyr Leu Phe Lys Lys Asn Glu His Gly Val Phe Phe Val Lys Val Asn
 85 90 95
 Ile Pro His Gly Thr Ser Ser Ile Lys Tyr Arg Leu Ile Val Asp Gly
 100 105 110
 Val Trp Thr Asn Asp Glu Tyr Asn Lys Asn Val Val Tyr Asn Glu Asp
 115 120 125
 Leu Ile Pro Phe Ser Lys Ile Glu Ile Ala Lys Glu Lys Ser Ser Tyr
 130 135 140
 Ile Ser Leu Arg Asn Pro Ile Gln Ser Tyr Asp Asn Asn Glu Ile Glu
 145 150 155 160
 Ile Phe Tyr Ile Gly Arg Pro Gly Gln Ile Val Thr Ile Ala Gly Ser
 165 170 175

Phe Asn Asn Phe Asn Pro Phe Leu Asn Arg Leu Ile Glu Lys Glu Asp
 180 185 190
 Asn Lys Gly Ile Tyr Thr Ile Lys Leu Lys Asn Leu Pro Lys Asp Arg
 195 200 205
 Ile Tyr Tyr Tyr Phe Ile Asp Ser Gly Asn Lys Val Ile Asp Lys Asn
 210 215 220
 Asn Val Asn Arg Ile Asn Leu Tyr Phe Val Glu Gly Ile Asp Asn Lys
 225 230 235 240
 Ile Asp Phe Glu Val Ser Tyr Phe Asp His Lys
 245 250

<210> 178
 <211> 230
 <212> PRT
 <213> Homo sapiens

<400> 178
 Asp Asp Tyr Leu Ile Tyr Asp Phe Asp Leu Ser Leu Asn Glu Phe Leu
 1 5 10 15
 Glu Val Ser Thr Arg Lys Asp Asn Leu Glu Pro Met Val Asp Ser Asn
 20 25 30
 Arg Ile Leu Leu Phe Tyr Pro Pro Lys Lys Glu Ile Arg Lys Ile Phe
 35 40 45
 Ala Ala Phe Asp Phe Asp Gln Tyr Ser Lys Lys Tyr Leu Phe Lys Lys
 50 55 60
 Asn Glu His Gly Val Phe Phe Val Lys Val Asn Ile Pro His Gly Thr
 65 70 75 80
 Ser Ser Ile Lys Tyr Arg Leu Ile Val Asp Gly Val Trp Thr Asn Asp
 85 90 95
 Glu Tyr Asn Lys Asn Val Val Tyr Asn Glu Asp Leu Ile Pro Phe Ser
 100 105 110
 Lys Ile Glu Ile Ala Lys Glu Lys Ser Ser Tyr Ile Ser Leu Arg Asn
 115 120 125
 Pro Ile Gln Ser Tyr Asp Asn Asn Glu Ile Glu Ile Phe Tyr Ile Gly
 130 135 140
 Arg Pro Gly Gln Ile Val Thr Ile Ala Gly Ser Phe Asn Asn Phe Asn
 145 150 155 160
 Pro Phe Leu Asn Arg Leu Ile Glu Lys Glu Asp Asn Lys Gly Ile Tyr
 165 170 175
 Thr Ile Lys Leu Lys Asn Leu Pro Lys Asp Arg Ile Tyr Tyr Tyr Phe
 180 185 190
 Ile Asp Ser Gly Asn Lys Val Ile Asp Lys Asn Asn Val Asn Arg Ile
 195 200 205

Asn Leu Tyr Phe Val Glu Gly Ile Asp Asn Lys Ile Asp Phe Glu Val
 210 215 220

Ser Tyr Phe Asp His Lys
 225 230

<210> 179
 <211> 756
 <212> DNA
 <213> Homo sapiens

<400> 179
 atgaaagaaa ggtgtttgta tttattgggt tttgtagctt tatgtgttaa caatcttttt 60
 tcagatgatt atttaattta tgactttgat ttaagtttaa atgaatttct agaagtttca 120
 acaagaaaag acaatcttga gcctatgggt gattccaatc gtatattatt gttttatcct 180
 cctaaaaaag aaattagaaa aatttttgct gcctttgact ttgatcagta ttctaagaaa 240
 tattttattca aaaaaaatga gcatggaggt ttttttgta aagttaatat tcctcatggc 300
 acaagcagta taaaatatag gcttattgta gacgggtgtt ggactaatga cgagtataat 360
 aaaaatgtag ttataatga ggatttaatc ccattttcta aaattgagat cgctaaagag 420
 aagtccagct atatttcttt gagaaatcca atacaatcat atgataacaa tgaaattgaa 480
 attttttaca taggtcgtcc tggacaaata gttacaatag ctggtagttt taacaatttt 540
 aatccttttt taaataggct tattgagaaa gaggacaata aggggaattta tactattaag 600
 cttaaaaatt tacccaagga tagaatttat tattatttta ttgattctgg taacaaagta 660
 atagataaaa ataatgttaa tagaattaat ttatattttg ttgagggaaat tgataataaa 720
 atagatttcg aagtttctta ttttgatcat aagtaa 756

<210> 180
 <211> 693
 <212> DNA
 <213> Homo sapiens

<400> 180
 gatgattatt taatttatga ctttgattta agtttaaag aatttctaga agtttcaaca 60
 agaaaagaca atcttgagcc tatggttgat tccaatcgta tattattggt ttatcctcct 120
 aaaaaagaaa tttagaaaaa ttttgctgcc tttgactttg atcagttatt taagaaatat 180
 ttattcaaaa aaaatgagca tggagttttt tttgttaaag ttaattattc tcatggcaca 240
 agcagtataa aatataggct tattgtagac ggtgtttgga ctaatgacga gtataataaa 300
 aatgtagttt ataatgagga tttaatccca ttttctaaaa ttgagatcgc taaagagaag 360
 tccagctata tttctttgag aaatccaata caatcatatg ataacaatga aattgaaatt 420
 ttttacatag gtcgtcctgg acaaataggt acaatagctg gtagttttta caattttaat 480
 ctttttttaa ataggcttat tgagaaagag gacaataagg gaatttatac tattaagctt 540
 aaaaatttac ccaaggatag aatttattat tattttattg attctggtta caaagtaata 600
 gataaaaata atgttaatag aattaattta tattttgttg aggggaattga taataaaaata 660
 gatttcgaag tttcctattt tgatcataag taa 693

<210> 181
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Arg Gln Arg Val Met Ile Ala Met Ala Leu Ser Cys His Pro Ser
 1 5 10 15

Leu Leu Ile Ala Asp Glu Pro Thr Thr Ala Leu Asp Val Thr Ile Gln
 20 25 30

Glu Gln Ile Leu Leu Leu Ile Lys Asn Leu Ser Lys Lys Phe Asn Thr
 35 40 45

Ser Thr Ile Phe Ile Thr His Asp Leu Ala Val Val Ala Glu Ile Cys
50 55 60
Asp Thr Val Ser Val Met Tyr Gln Gly Lys Ile Val Glu Glu Gly Thr
65 70 75 80
Val Glu Glu Ile Phe Asn Asn Pro Lys His Pro Tyr Thr Ile Gly Leu
85 90 95
Leu Lys Ser Ile Leu Thr Leu Glu His Asp Pro Asn Lys Lys Leu Tyr
100 105 110
Ser Thr Lys Glu Asn Pro Met Lys Ile Thr Lys Thr Ser Thr Glu Glu
115 120 125

Phe

<210> 182
<211> 108
<212> PRT
<213> Homo sapiens

<400> 182
Glu Pro Thr Thr Ala Leu Asp Val Thr Ile Gln Glu Gln Ile Leu Leu
1 5 10 15
Leu Ile Lys Asn Leu Ser Lys Lys Phe Asn Thr Ser Thr Ile Phe Ile
20 25 30
Thr His Asp Leu Ala Val Val Ala Glu Ile Cys Asp Thr Val Ser Val
35 40 45
Met Tyr Gln Gly Lys Ile Val Glu Glu Gly Thr Val Glu Glu Ile Phe
50 55 60
Asn Asn Pro Lys His Pro Tyr Thr Ile Gly Leu Leu Lys Ser Ile Leu
65 70 75 80
Thr Leu Glu His Asp Pro Asn Lys Lys Leu Tyr Ser Thr Lys Glu Asn
85 90 95
Pro Met Lys Ile Thr Lys Thr Ser Thr Glu Glu Phe
100 105

<210> 183
<211> 390
<212> DNA
<213> Homo sapiens

<400> 183
atgagacaaa gagttatgat tgccatggct cttagctgtc atccatcctt attaatagca 60
gatgaaccaa caacagccct tgatgttaca atccaagagc aaatattatt attaatacaa 120
aacctatcta aaaaattcaa tacttctacc atatttataa ctcattgatct tgcggttggt 180
gctgaaattt gtgatacagt atctgtaatg tatcaaggaa aaattgtaga agaaggaaca 240
gtagaggaaa tatttaacaa tcctaagcat ccttacacca ttgggctttt aaaatcaatt 300
cttacgctag aacacgatcc aaataaaaag ctttattcaa caaaagaaaa ccctatgaag 360
atcacaaaaa ccagcaccga ggagttttta 390

<210> 184

<211> 327
 <212> DNA
 <213> Homo sapiens

<400> 184
 gaaccaacaa cagcccttga tgttacaatc caagagcaaa tattattatt aatcaaaaaac 60
 ctatctaaaa aattcaatac ttctaccata tttataactc atgatcttgc gggtgttgct 120
 gaaatttgtg atacagtatc tgtaatgtat caaggaaaaa ttgtagaaga aggaacagta 180
 gaggaatat ttaacaatcc taagcatcct tacaccattg ggctttttaa atcaattctt 240
 acgctagaac acgatccaaa taaaaagctt tattcaacaa aagaaaaccc tatgaagatc 300
 acaaaaacca gcaccgagga gtttttaa 327

<210> 185
 <211> 147
 <212> PRT
 <213> Homo sapiens

<400> 185
 Met Ala Ile Met Glu Arg Ser Ile Ile Gly Leu Phe Ile Ala Leu Ala
 1 5 10 15
 Phe Val Ser Trp Leu Thr Val Ala Arg Val Val Arg Gly Gln Val Gln
 20 25 30
 Ser Leu Ser Ser Ser Glu Phe Ile Gln Ala Ala Lys Thr Leu Gly Ala
 35 40 45
 Thr Asn Gln Arg Ile Ile Leu Lys His Leu Ile Pro Asn Ser Ile Gly
 50 55 60
 Met Ile Val Ile Phe Thr Thr Ile Arg Val Pro Ser Phe Ile Met Ala
 65 70 75 80
 Glu Ala Phe Leu Ser Phe Leu Gly Leu Gly Ile Ser Ala Pro Met Thr
 85 90 95
 Ser Trp Gly Glu Leu Val Gln Asn Gly Ile Ala Thr Phe Val Glu Tyr
 100 105 110
 Pro Trp Lys Val Phe Ile Pro Ala Ile Val Met Thr Ile Phe Leu Leu
 115 120 125
 Phe Met Asn Phe Leu Gly Asp Gly Leu Arg Asp Ala Phe Asp Pro Lys
 130 135 140
 Asp Ser Ile
 145

<210> 186
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 186
 Arg Val Val Arg Gly Gln Val Gln Ser Leu Ser Ser Ser Glu Phe Ile
 1 5 10 15
 Gln Ala Ala Lys Thr Leu Gly Ala Thr Asn Gln Arg Ile Ile Leu Lys
 20 25 30

His Leu Ile Pro Asn Ser Ile Gly Met Ile Val Ile Phe Thr Thr Ile
 35 40 45

Arg Val Pro Ser Phe Ile Met Ala Glu Ala Phe Leu Ser Phe Leu Gly
 50 55 60

Leu Gly Ile Ser Ala Pro Met Thr Ser Trp Gly Glu Leu Val Gln Asn
 65 70 75 80

Gly Ile Ala Thr Phe Val Glu Tyr Pro Trp Lys Val Phe Ile Pro Ala
 85 90 95

Ile Val Met Thr Ile Phe Leu Leu Phe Met Asn Phe Leu Gly Asp Gly
 100 105 110

Leu Arg Asp Ala Phe Asp Pro Lys Asp Ser Ile
 115 120

<210> 187
 <211> 444
 <212> DNA
 <213> Homo sapiens

<400> 187
 atggcaataa tggaaagaag tataatcggc ttattcatag cacttgcatt tgtatcatgg 60
 ttaacagtag ctcgagttgt acgaggccaa gtacaatcac tatcaagttc ggaatttata 120
 caagcagcca aaacccttgg tgcaacaaat caaagaataa tcttaaaaca cttgatccct 180
 aatagcattg gaatgatagt tatattcaca acaataaggg ttccaagctt tattatggct 240
 gaagcatttt tatecttttt aggacttgga atttcagctc caatgacaag ctggggagaa 300
 ttagtgcaaa atggaattgc tacatttggt gaatatccat ggaaagtgtt tattccagct 360
 atagttatga caatatttct attatttatg aacttttttag gtgatgggct aagggatgct 420
 tttgatccaa aagatagcat ctaa 444

<210> 188
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 188
 cgagttgtac gaggccaagt acaatcacta tcaagttcgg aatttatata agcagccaaa 60
 acccttggtg caacaaatca aagaataatc ttaaaacact tgatccctaa tagcattgga 120
 atgatagtta tattcacaaac aataagggtt ccaagcttta ttatggctga agcattttta 180
 tccttttttag gacttggaat ttcagctcca atgacaagct ggggagaatt agtgcaaaat 240
 ggaattgcta catttggtga atatccatgg aaagttttta ttccagctat agttatgaca 300
 atatttctat ttttatgaa ctttttaggt gatgggctaa gggatgcttt tgatccaaaa 360
 gatagcatct aa 372

<210> 189
 <211> 306
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Leu Lys Phe Thr Leu Lys Lys Ile Leu Gly Ile Ile Pro Thr Leu
 1 5 10 15

Leu Val Ile Ile Phe Leu Cys Phe Phe Val Met Arg Met Ala Pro Gly
 20 25 30

Ser Pro Phe Asp Ser Glu Lys Pro Ile Asp Pro Gln Val Lys Ala Arg

35					40					45					
Leu	Met	Glu	Lys	Tyr	His	Leu	Asp	Lys	Pro	Phe	Tyr	Ile	Gln	Ala	Phe
50						55					60				
Tyr	Tyr	Ile	Thr	Asn	Ala	Leu	Arg	Gly	Asp	Leu	Gly	Pro	Ser	Leu	Lys
65					70					75					80
Lys	Lys	Asp	Leu	Thr	Val	Ser	Gln	Tyr	Ile	Lys	Leu	Gly	Phe	Pro	Lys
				85					90					95	
Ser	Leu	Thr	Leu	Gly	Val	Ile	Ser	Leu	Ile	Ile	Ser	Leu	Ser	Ile	Gly
			100					105					110		
Ile	Pro	Ile	Gly	Ile	Leu	Ala	Ala	Ile	Tyr	Lys	Asn	Thr	Tyr	Val	Asp
			115				120					125			
Tyr	Ile	Ile	Thr	Ser	Ile	Ala	Ile	Leu	Gly	Ile	Ser	Ile	Pro	Leu	Phe
	130					135					140				
Val	Ile	Gly	Pro	Ile	Leu	Gln	Tyr	Phe	Phe	Ala	Ile	Lys	Trp	Gly	Leu
145						150					155				160
Leu	Tyr	Thr	Ser	Gly	Trp	Ile	Thr	Glu	Arg	Gly	Gly	Phe	Ser	Asn	Leu
				165					170					175	
Ile	Leu	Pro	Ile	Ile	Thr	Leu	Ser	Met	Pro	Asn	Val	Ala	Ile	Phe	Ala
			180					185					190		
Arg	Ile	Ile	Arg	Gly	Ser	Met	Leu	Glu	Ile	Ile	Gln	Ser	Asp	Phe	Ile
			195				200					205			
Arg	Thr	Ala	Arg	Ala	Lys	Gly	Leu	Ser	Phe	Lys	Lys	Ile	Val	Ile	Lys
			210			215					220				
His	Met	Leu	Arg	Gly	Ala	Met	Leu	Pro	Val	Val	Ser	Tyr	Ile	Gly	Pro
225						230					235				240
Ala	Phe	Ala	Ala	Ile	Ile	Ser	Gly	Ser	Val	Val	Ile	Glu	Lys	Ile	Phe
				245					250					255	
Arg	Ile	Ala	Gly	Met	Gly	Met	Phe	Ile	Thr	Glu	Ser	Ala	Leu	Asn	Arg
			260					265					270		
Asp	Tyr	Pro	Val	Leu	Met	Gly	Gly	Leu	Leu	Val	Tyr	Ser	Ile	Ile	Leu
		275					280					285			
Leu	Ile	Ser	Ile	Leu	Ile	Ser	Asp	Ile	Ile	Tyr	Lys	Ile	Leu	Asp	Pro
		290				295					300				

Arg Val
305

<210> 190
<211> 274
<212> PRT
<213> Homo sapiens

<400> 190
Ser Pro Phe Asp Ser Glu Lys Pro Ile Asp Pro Gln Val Lys Ala Arg

1	5	10	15
Leu Met Glu Lys Tyr His Leu Asp Lys Pro Phe Tyr Ile Gln Ala Phe	20	25	30
Tyr Tyr Ile Thr Asn Ala Leu Arg Gly Asp Leu Gly Pro Ser Leu Lys	35	40	45
Lys Lys Asp Leu Thr Val Ser Gln Tyr Ile Lys Leu Gly Phe Pro Lys	50	55	60
Ser Leu Thr Leu Gly Val Ile Ser Leu Ile Ile Ser Leu Ser Ile Gly	65	70	75
Ile Pro Ile Gly Ile Leu Ala Ala Ile Tyr Lys Asn Thr Tyr Val Asp	85	90	95
Tyr Ile Ile Thr Ser Ile Ala Ile Leu Gly Ile Ser Ile Pro Leu Phe	100	105	110
Val Ile Gly Pro Ile Leu Gln Tyr Phe Phe Ala Ile Lys Trp Gly Leu	115	120	125
Leu Tyr Thr Ser Gly Trp Ile Thr Glu Arg Gly Gly Phe Ser Asn Leu	130	135	140
Ile Leu Pro Ile Ile Thr Leu Ser Met Pro Asn Val Ala Ile Phe Ala	145	150	155
Arg Ile Ile Arg Gly Ser Met Leu Glu Ile Ile Gln Ser Asp Phe Ile	165	170	175
Arg Thr Ala Arg Ala Lys Gly Leu Ser Phe Lys Lys Ile Val Ile Lys	180	185	190
His Met Leu Arg Gly Ala Met Leu Pro Val Val Ser Tyr Ile Gly Pro	195	200	205
Ala Phe Ala Ala Ile Ile Ser Gly Ser Val Val Ile Glu Lys Ile Phe	210	215	220
Arg Ile Ala Gly Met Gly Met Phe Ile Thr Glu Ser Ala Leu Asn Arg	225	230	235
Asp Tyr Pro Val Leu Met Gly Gly Leu Leu Val Tyr Ser Ile Ile Leu	245	250	255
Leu Ile Ser Ile Leu Ile Ser Asp Ile Ile Tyr Lys Ile Leu Asp Pro	260	265	270

Arg Val

<210> 191

<211> 921

<212> DNA

<213> Homo sapiens

<400> 191

atgttaaagt ttactttaaa gaaaatatta ggaataatac caactttact ggtaataatt 60

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tttttatgct tttttgtaat gagaatggct cctggaagtc catttgattc tgaaaaacct 120
attgatcctc aagtaaaagc aagattgatg gaaaaatata accttgacaa gcctttttat 180
attcaagctt tttattacat tacaaacgct ctcaggggag atctgggacc ttctttgaaa 240
aagaaagacc ttacagttag tcaatacata aaattaggat ttccaaaatc acttacacta 300
ggagtaatat cccttattat atcactatca ataggaatac caataggat attagctgcc 360
atattataaaa atacttatgt ggattatata ataacatcaa tagcaatatt ggggatttca 420
ataccattat tcgtaatagg gccaatttta caatattttt ttgcaattaa atgggggttg 480
ctttatacct ctggatggat tacagaaaga ggaggatttt caaatttaat tctaccata 540
ataactctta gcatgcccaa cgtagctatt ttcgcaagaa taatcagagg atcaatgcta 600
gaaataatac aaagcgactt tataagaact gcgcgtgcaa aagggtctaa cttcaaaaag 660
atagttataa agcatatggt aagaggagca atgttgccctg tagtaagcta tatagggtcca 720
gcatttgctg ctataatatac tgggaagcgtg gttattgaaa aaatatttag aattgctgga 780
atgggaatgt ttataacaga atccgcacta aacagagatt acccagtatt aatgggcgga 840
ttgttagtat attcaataat actgcttatt tctatattaa tatcagatat tatatataaa 900
atattagatc caagagtata a                                     921

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<210> 192
 <211> 825
 <212> DNA
 <213> Homo sapiens

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<400> 192
agtccatttg attctgaaaa acctattgat cctcaagtaa aagcaagatt gatggaaaaa 60
tatcaccttg acaagccttt ttatattcaa gctttttatt acattacaaa cgctctcagg 120
ggagatctgg gaccttcttt gaaaaagaaa gaccttacag ttagtcaata cataaaatta 180
ggatttccaa aatcacttac actaggagta atatccctta ttatatcact atcaatagga 240
ataccaatag gtatatttagc tgccatttat aaaaatactt atgtggatta tataataaca 300
tcaatagcaa tattggggat ttcaatacca ttattcgtaa tagggccaat tttacaatat 360
ttttttgcaa ttaaattgggg tttgctttat acctctggat ggattacaga aagaggagga 420
ttttcaaatt taattctacc cataataact cttagcatgc ccaacgtagc tattttcgca 480
agaataatca gaggatcaat gctagaaata atacaaagcg actttataag aactgcgcgt 540
gcaaaagggc taagcttcaa aaagatagtt ataaagcata tgtaagagg agcaatgttg 600
cctgtagtaa gctatatagg tccagcattt gctgctataa tatctggaag cgtgggttatt 660
gaaaaaatat ttagaattgc tggaaatggga atgtttataa cagaatccgc actaaacaga 720
gattaccagc tattaatggg cggattgtta gtatattcaa taatactgct tatttctata 780
ttaatatcag atattatata taaaatatta gatccaagag tataa                                     825

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<210> 193
 <211> 523
 <212> PRT
 <213> Homo sapiens

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<400> 193
Met Lys Tyr Ile Lys Ile Ala Leu Met Leu Ile Ile Phe Ser Leu Ile
  1             5             10             15

Ala Cys Ile Ser Asn Ala Lys Lys Glu Lys Ile Val Phe Arg Val Ser
      20             25             30

Asn Leu Ser Glu Pro Ser Ser Leu Asp Pro Gln Leu Ser Thr Asp Leu
      35             40             45

Tyr Gly Ser Asn Ile Ile Thr Asn Leu Phe Leu Gly Leu Ala Val Lys
      50             55             60

Asp Ser Gln Thr Gly Lys Tyr Lys Pro Gly Leu Ala Lys Ser Trp Asn
      65             70             75             80

Ile Ser Glu Asp Gly Ile Ile Tyr Thr Phe Asn Leu Arg Glu Asp Ile
      85             90             95

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Val Trp Ser Asp Gly Val Ala Ile Thr Ala Glu Glu Ile Lys Lys Ser
 100 105 110
 Tyr Leu Arg Ile Leu Asn Lys Lys Thr Ala Ala Met Tyr Ala Asn Leu
 115 120 125
 Ile Lys Ser Thr Ile Lys Asn Ala Gln Glu Tyr Phe Asp Glu Thr Val
 130 135 140
 Pro Glu Ser Glu Leu Gly Ile Lys Ala Ile Asp Ser Lys Thr Leu Glu
 145 150 155 160
 Ile Thr Leu Thr Ser Pro Lys Pro Tyr Phe Pro Asp Met Leu Thr His
 165 170 175
 Ser Ala Tyr Ile Pro Val Pro Met His Ile Val Glu Lys Tyr Gly Glu
 180 185 190
 Asn Trp Thr Asn Pro Glu Asn Ile Val Val Ser Gly Ala Tyr Lys Leu
 195 200 205
 Lys Glu Arg Ser Ile Asn Asp Lys Ile Val Ile Glu Lys Asn Glu Lys
 210 215 220
 Tyr Tyr Asn Ala Lys Asn Val Glu Ile Asp Glu Val Ile Phe Tyr Pro
 225 230 235 240
 Thr Glu Gly Ser Val Ala Tyr Asn Met Tyr Ile Asn Gly Glu Leu Asp
 245 250 255
 Phe Leu Gln Gly Ala Glu Lys Asn Asn Leu Glu Glu Ile Lys Ile Arg
 260 265 270
 Asp Asp Tyr Tyr Ser Gly Leu Lys Asn Gly Met Ala Tyr Ile Ala Phe
 275 280 285
 Asn Thr Thr Ile Lys Pro Leu Asp Asn Leu Lys Val Arg Gln Ala Ile
 290 295 300
 Ser Leu Ala Ile Asp Arg Glu Thr Leu Thr Lys Val Val Leu Lys Gly
 305 310 315 320
 Ser Ser Asp Pro Thr Arg Asn Leu Thr Pro Lys Phe Asp Asp Tyr Ser
 325 330 335
 Tyr Gly Lys Asn Leu Ile Leu Phe Asp Pro Glu Asn Ala Lys Lys Leu
 340 345 350
 Leu Ala Glu Ala Gly Tyr Pro Asp Gly Lys Gly Phe Pro Thr Leu Lys
 355 360 365
 Tyr Lys Ile Ser Glu Gly Arg Pro Thr Thr Ala Glu Phe Leu Gln Glu
 370 375 380
 Gln Phe Lys Lys Ile Leu Asn Ile Asn Leu Glu Ile Glu Asn Glu Glu
 385 390 395 400
 Trp Thr Thr Phe Leu Gly Ser Arg Arg Thr Gly Asn Tyr Gln Met Ser
 405 410 415

Ser Val Gly Trp Ile Gly Asp Tyr Phe Asp Pro Leu Thr Phe Leu Asp
420 425 430

Ser Leu Phe Thr Thr Glu Asn His Phe Leu Gly Ala Tyr Lys Tyr Ser
435 440 445

Asn Lys Glu Tyr Asp Ala Leu Ile Lys Lys Ser Asn Phe Glu Leu Asp
450 455 460

Pro Ile Lys Arg Gln Asp Ile Leu Arg Gln Ala Glu Glu Ile Ile Ala
465 470 475 480

Glu Lys Asp Phe Pro Met Ala Pro Leu Tyr Ile Pro Lys Ser His Tyr
485 490 495

Leu Phe Arg Asn Asp Lys Trp Thr Gly Trp Val Pro Asn Ile Ala Glu
500 505 510

Ser Tyr Leu Tyr Glu Asp Ile Lys Thr Lys Lys
515 520

<210> 194

<211> 506

<212> PRT

<213> Homo sapiens

<400> 194

Cys Ile Ser Asn Ala Lys Lys Glu Lys Ile Val Phe Arg Val Ser Asn
1 5 10 15

Leu Ser Glu Pro Ser Ser Leu Asp Pro Gln Leu Ser Thr Asp Leu Tyr
20 25 30

Gly Ser Asn Ile Ile Thr Asn Leu Phe Leu Gly Leu Ala Val Lys Asp
35 40 45

Ser Gln Thr Gly Lys Tyr Lys Pro Gly Leu Ala Lys Ser Trp Asn Ile
50 55 60

Ser Glu Asp Gly Ile Ile Tyr Thr Phe Asn Leu Arg Glu Asp Ile Val
65 70 75 80

Trp Ser Asp Gly Val Ala Ile Thr Ala Glu Glu Ile Lys Lys Ser Tyr
85 90 95

Leu Arg Ile Leu Asn Lys Lys Thr Ala Ala Met Tyr Ala Asn Leu Ile
100 105 110

Lys Ser Thr Ile Lys Asn Ala Gln Glu Tyr Phe Asp Glu Thr Val Pro
115 120 125

Glu Ser Glu Leu Gly Ile Lys Ala Ile Asp Ser Lys Thr Leu Glu Ile
130 135 140

Thr Leu Thr Ser Pro Lys Pro Tyr Phe Pro Asp Met Leu Thr His Ser
145 150 155 160

Ala Tyr Ile Pro Val Pro Met His Ile Val Glu Lys Tyr Gly Glu Asn
165 170 175

Trp Thr Asn Pro Glu Asn Ile Val Val Ser Gly Ala Tyr Lys Leu Lys
 180 185 190
 Glu Arg Ser Ile Asn Asp Lys Ile Val Ile Glu Lys Asn Glu Lys Tyr
 195 200 205
 Tyr Asn Ala Lys Asn Val Glu Ile Asp Glu Val Ile Phe Tyr Pro Thr
 210 215 220
 Glu Gly Ser Val Ala Tyr Asn Met Tyr Ile Asn Gly Glu Leu Asp Phe
 225 230 235 240
 Leu Gln Gly Ala Glu Lys Asn Asn Leu Glu Glu Ile Lys Ile Arg Asp
 245 250 255
 Asp Tyr Tyr Ser Gly Leu Lys Asn Gly Met Ala Tyr Ile Ala Phe Asn
 260 265 270
 Thr Thr Ile Lys Pro Leu Asp Asn Leu Lys Val Arg Gln Ala Ile Ser
 275 280 285
 Leu Ala Ile Asp Arg Glu Thr Leu Thr Lys Val Val Leu Lys Gly Ser
 290 295 300
 Ser Asp Pro Thr Arg Asn Leu Thr Pro Lys Phe Asp Asp Tyr Ser Tyr
 305 310 315 320
 Gly Lys Asn Leu Ile Leu Phe Asp Pro Glu Asn Ala Lys Lys Leu Leu
 325 330 335
 Ala Glu Ala Gly Tyr Pro Asp Gly Lys Gly Phe Pro Thr Leu Lys Tyr
 340 345 350
 Lys Ile Ser Glu Gly Arg Pro Thr Thr Ala Glu Phe Leu Gln Glu Gln
 355 360 365
 Phe Lys Lys Ile Leu Asn Ile Asn Leu Glu Ile Glu Asn Glu Glu Trp
 370 375 380
 Thr Thr Phe Leu Gly Ser Arg Arg Thr Gly Asn Tyr Gln Met Ser Ser
 385 390 395 400
 Val Gly Trp Ile Gly Asp Tyr Phe Asp Pro Leu Thr Phe Leu Asp Ser
 405 410 415
 Leu Phe Thr Thr Glu Asn His Phe Leu Gly Ala Tyr Lys Tyr Ser Asn
 420 425 430
 Lys Glu Tyr Asp Ala Leu Ile Lys Lys Ser Asn Phe Glu Leu Asp Pro
 435 440 445
 Ile Lys Arg Gln Asp Ile Leu Arg Gln Ala Glu Glu Ile Ile Ala Glu
 450 455 460
 Lys Asp Phe Pro Met Ala Pro Leu Tyr Ile Pro Lys Ser His Tyr Leu
 465 470 475 480
 Phe Arg Asn Asp Lys Trp Thr Gly Trp Val Pro Asn Ile Ala Glu Ser
 485 490 495

Tyr Leu Tyr Glu Asp Ile Lys Thr Lys Lys
500 505

<210> 195
<211> 1572
<212> DNA
<213> Homo sapiens

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gatacctcaac tctcaacaga cttttacggt agcaacatta ttacaaacct attccttaggc 180
ctagcggtaa aagattctca aactggaaaa tataaaccag gacttgcaaa aagttggaat 240
atctctgaag atggaattat ttacacattt aacctaaagag aagatatagt ttggagcgat 300
ggagttgcca ttactgccga ggagataaaa aatcataacc taagaatttt aaataaaaaa 360
acagctgcaa tgtatgctaa ttttaataaaa tctacaataa aaaatgcaca agaataatttc 420
gatgagacag tgcctgaatc tgagcttggtc ataaaggcta ttgacagcaa aaccttagag 480
ataacattaa catctccaaa gccttatttt cctgatatgc taacacactc agcatacata 540
ccagttccaa tgcataattgt tgaaaaatat ggagaaaatt ggacaaatcc tgaaaaatata 600
gttggttagtg gcgcatacaa acttaaagaa agatcaatta acgataaaat cgtaatagaa 660
aaaaatgaaa aatactataa tgcaaaaaat gtagaaattg atgaagtaat attttaccca 720
acagaaggta gcgtggctta caatatgtac ataaacggtg aactcgattt tctacaagga 780
gcagaaaaga ataatttaga agaaattaaa ataagagatg attattattc tgggttaaaa 840
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ataggagatt attttgatcc cttaacattc ttagacagct tatttacaac agaaaatcat 1320
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tttgaacttg atccaataaa aagacaagac attttaagac aagctgaaga gataatagca 1440
gaaaaagact ttcctatggc acctttatat ataccctaat ctcatattct tttcagaaat 1500
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actaaaaaat aa 1572

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<211> 1521
<212> DNA
<213> Homo sapiens

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ttcttaggcc tagcggtaaa agattctcaa actggaaaat ataaaccagg acttgcaaaa 180
agttggaata tttctgaaga tggaattatt tacacattta acctaaagaga agatatagtt 240
tggaagcgat gagttgccat tactgccgag gagataaaaa aatcatacct aagaatttta 300
aataaaaaaa cagctgcaat gtatgctaatt ttaataaaat ctacaataaa aatgcacaa 360
gaatatttcg atgagacagt gcctgaattc gagcttgga taaaggctat tgacagcaaa 420
accttagaga taacattaac atctccaaag ccttattttc ctgatatgct aacacactca 480
gcatacatag cagttccaat gcatattgtt gaaaaatatg gagaaaattg gacaaatcct 540
gaaaatatag ttgttagtg cgcatacaaa cttaaagaaa gatcaattaa cgataaaatc 600
gtaatagaaa aaaatgaaaa atactataat gcaaaaaatg tagaaattga tgaagtaata 660
ttttacccaa cagaaggtag cgtggcttac aatatgtaca taaacggtga actcgatttt 720
ctacaaggag cagaaaagaa taatttagaa gaaattaaaa taagagatga ttattattct 780
gggttaaaaa acggaatggc atacatagca ttcaatacaa caataaaacc actagacaa 840
ttaaaagtta gacaagccat ctcccttgcc attgacagag aaactttaac taaagtagtt 900
ttaaaggga gttcagatcc aacaagaaat ctaactccaa aatttgatga ttattcttat 960

ggaaaaaatt taatactatt tgatcctgag aatgcaaaaa aacttttagc tgaagctgga 1020
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 gtgggggtgga taggagatta ttttgatccc ttaacattct tagacagctt atttacaaca 1260
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 ataatagcag aaaaagactt tcctatggca cctttatata tacccaaadc tcattatctt 1440
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<210> 197
 <211> 369
 <212> PRT
 <213> Homo sapiens

<400> 197
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 Ala His Glu Glu Gly Phe His Leu Phe Ile Arg Lys Lys Pro Ala Ile
 35 40 45
 Lys Ser Val Ile Leu Thr Glu Ser Phe Glu Ile Pro Asp Lys Lys Lys
 50 55 60
 Asp Val Ala Thr Tyr Ser Phe Arg Thr Leu Ser Tyr Asn Lys Val Asn
 65 70 75 80
 Gly Asp Glu Ile Arg Ile Leu Asn Gly Arg Val Ile Lys Asn Lys Glu
 85 90 95
 Leu Leu Ser Leu Thr Ser Ser Thr Pro Val Pro Asn Lys Lys Phe Gly
 100 105 110
 Glu Ala Phe His Ile Leu Ile Pro Lys Lys Leu Lys Tyr Gly Phe Pro
 115 120 125
 Asn Phe Ser Thr Arg Ser Gly Asp Ile Asp Leu Glu Val Leu Lys Ser
 130 135 140
 Lys Lys Glu Pro Phe Trp Phe Ser Ile Arg Ser Phe Glu Lys Lys Tyr
 145 150 155 160
 Asn Asp Tyr Leu Gly Arg Tyr Gln Asp Asn Ala Tyr Glu Leu Leu Phe
 165 170 175
 Lys Asp Asp Gln Asn Gln Gly Lys Ile Glu Phe Asn Glu Leu Lys Asp
 180 185 190
 Thr Phe Thr Lys Phe Ser Asp Glu Val Val Ile Ala Asn Asn Gly Ile
 195 200 205
 Asp Ile Val Asp Lys Ile Asn Lys Ile Leu Lys Asn Ser Glu Asp Ser
 210 215 220
 Val Tyr Asp Leu Asp Leu Val Leu Val Val Asp Val Thr Asp Ser Met

225		230		235		240
Lys Ser Asn Ile Glu Ile Leu Lys Glu His Leu Phe Ser Ile Ile Glu						
	245			250		255
Pro Gln Leu Gln Lys Phe Lys Ser Tyr Arg Ile Gly Leu Val Phe Tyr						
	260			265		270
Lys Asp Tyr Leu Glu Asp Phe Leu Thr Lys Ala Phe Asp Phe Asn Thr						
	275			280		285
Ile Pro Tyr Leu Asn Asn Ile Leu Lys Tyr Val Asn Val Gly Gly Gly						
	290			295		300
Gly Asp Tyr Pro Glu Ala Val Phe Glu Gly Ile Asp Ala Ala Val Thr						
	305			310		315
Gln Phe Asp Trp Arg Ala Glu Arg Arg Phe Ile Ile Val Ile Gly Asp						
				325		330
Ala Pro Pro His Glu Tyr Pro Arg Gly Ser Ile Val Tyr Lys Asp Val						
				340		345
Ile Asn Ser Ala Lys Glu Lys Asp Ile Thr Ile Tyr Gly Ile Ile Phe						
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Gln

<210> 198
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 198
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 20 25 30
 Lys Ser Val Ile Leu Thr Glu Ser Phe Glu Ile Pro Asp Lys Lys Lys
 35 40 45
 Asp Val Ala Thr Tyr Ser Phe Arg Thr Leu Ser Tyr Asn Lys Val Asn
 50 55 60
 Gly Asp Glu Ile Arg Ile Leu Asn Gly Arg Val Ile Lys Asn Lys Glu
 65 70 75 80
 Leu Leu Ser Leu Thr Ser Ser Thr Pro Val Pro Asn Lys Lys Phe Gly
 85 90 95
 Glu Ala Phe His Ile Leu Ile Pro Lys Lys Leu Lys Tyr Gly Phe Pro
 100 105 110
 Asn Phe Ser Thr Arg Ser Gly Asp Ile Asp Leu Glu Val Leu Lys Ser
 115 120 125
 Lys Lys Glu Pro Phe Trp Phe Ser Ile Arg Ser Phe Glu Lys Lys Tyr

130					135					140					
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145					150					155					160
Lys	Asp	Asp	Gln	Asn	Gln	Gly	Lys	Ile	Glu	Phe	Asn	Glu	Leu	Lys	Asp
			165						170					175	
Thr	Phe	Thr	Lys	Phe	Ser	Asp	Glu	Val	Val	Ile	Ala	Asn	Asn	Gly	Ile
			180					185					190		
Asp	Ile	Val	Asp	Lys	Ile	Asn	Lys	Ile	Leu	Lys	Asn	Ser	Glu	Asp	Ser
		195					200					205			
Val	Tyr	Asp	Leu	Asp	Leu	Val	Leu	Val	Val	Asp	Val	Thr	Asp	Ser	Met
	210					215					220				
Lys	Ser	Asn	Ile	Glu	Ile	Leu	Lys	Glu	His	Leu	Phe	Ser	Ile	Ile	Glu
225				230						235					240
Pro	Gln	Leu	Gln	Lys	Phe	Lys	Ser	Tyr	Arg	Ile	Gly	Leu	Val	Phe	Tyr
			245						250					255	
Lys	Asp	Tyr	Leu	Glu	Asp	Phe	Leu	Thr	Lys	Ala	Phe	Asp	Phe	Asn	Thr
			260					265					270		
Ile	Pro	Tyr	Leu	Asn	Asn	Ile	Leu	Lys	Tyr	Val	Asn	Val	Gly	Gly	Gly
		275					280					285			
Gly	Asp	Tyr	Pro	Glu	Ala	Val	Phe	Glu	Gly	Ile	Asp	Ala	Ala	Val	Thr
	290					295					300				
Gln	Phe	Asp	Trp	Arg	Ala	Glu	Arg	Arg	Phe	Ile	Ile	Val	Ile	Gly	Asp
305				310						315					320
Ala	Pro	Pro	His	Glu	Tyr	Pro	Arg	Gly	Ser	Ile	Val	Tyr	Lys	Asp	Val
			325						330					335	
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Gln

<210> 199

<211> 1110

<212> DNA

<213> Homo sapiens

<400> 199

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gataagaaaa aagatgtggc tactttattca tttcgtacat taagttataa taaggttaat 240
ggagatgaaa ttcggatttt aaatggaaga gttattaaga ataaagaact tttatcattg 300
acatcttcca cccctgttcc taataaaaag tttggagaag cttttcatat attgattcca 360
aaaaaattaa aatatggatt tccaaatttt tcaacaagaa gtggatgatat tgacttagaa 420
gtattaaaaa gtaaaaaaga gcccttttgg ttttctataa gatcttttga gaaaaaatat 480
aatgattatt tgggcagata tcaagacaat gcttatgaat tgcttttcaa ggatgatcaa 540
aatcagggaa aaattgaatt taatgaatta aaagatactt ttacaaaatt ttcagatgag 600

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gttggttattg ctaataatgg cattgatatt gttgataaaa taaacaaaat tttaaaaaac 660
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aaaagcaata ttgagattct aaaagagcat ttgttttcaa taatagaacc tcaacttcaa 780
aagttttaa cctacagaat aggtcttggt ttttataaag actatcttga agatttttta 840
accaaagctt ttgattttta tactattcct tatttaaata atattcttaa gtatgttaat 900
gttgggtggcg gtgggggatta tccagaagct gtttttgagg ggattgatgc tgctgtgacc 960
caatttgatt ggcgggcaga aagaagggtt attattgtta taggagatgc acctcctcat 1020
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attacaattt atggaataat atttcagtaa 1110

<210> 200
<211> 1062
<212> DNA
<213> Homo sapiens

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tttgaaattc ctgataagaa aaaagatgtg gctacttatt catttcgtac attaagttat 180
aataagggtta atggagatga aattcggatt ttaaattggaa gagttattaa gaataaagaa 240
ctttttatcat tgacatcttc caccctgtt cctaataaaa agtttgaggaga agcttttcat 300
atattgatct caaaaaaatt aaaatatgga tttccaaatt tttcaacaag aagtgggtgat 360
attgacttag aagtattaaa aagtaaaaaa gagccctttt ggttttctat aagatctttt 420
gagaaaaaat ataatgatta tttgggcaga tatcaagaca atgcttatga attgcttttc 480
aaggatgatc aaaatcaggg aaaaattgaa tttaatgaat taaaagatac ttttacaaaa 540
ttttcagatg aggttggttat tgctaataat ggcattgata ttgttgataa aataaacaaa 600
attttaaaaa actcagaaga ttcagtttat gatttagatt tagtgcttgt tgttgatgtt 660
actgatagta tgaaaagcaa tattgagatt ctaaaagagc atttgttttc aataatagaa 720
cctcaacttc aaaagtttaa atcctacaga ataggtcttg ttttttataa agactatctt 780
gaagattttt taaccaaagc ttttgatttt aatactattc cttattttaa taatattctt 840
aagtatgtta atgttggttg cggtggggat tatccagaag ctgtttttga ggggattgat 900
gctgctgtga cccaatttga ttggcgggca gaaagaaggt ttattattgt tataggagat 960
gcacctctc atgagtatcc aagaggggtc attgtttata aagatgttat caattctgca 1020
aaggaaaaag atattacaat ttatggaata atatttcagt aa 1062

<210> 201
<211> 310
<212> PRT
<213> Homo sapiens

<400> 201
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20 25 30
Ile Lys Met Ile Ser Trp Arg Phe Ile Leu Phe Leu Ile Met Ala Thr
35 40 45
Gly Ile Ala Thr Cys Ala Lys Ser Asn Ser Leu Asn Leu Gly Asn Glu
50 55 60
Gly Gln Ile Tyr Phe Gly Ala Phe Leu Val Tyr Ile Phe Ser Ser Phe
65 70 75 80
Phe Gly Leu Thr Tyr Phe Asn Phe Val Phe Leu Ile Leu Leu Ser Ser
85 90 95
Phe Phe Val Gly Leu Leu Gly Leu Ile Pro Phe Phe Ile Thr Phe Phe

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 <211> 774
 <212> DNA
 <213> Homo sapiens

<400> 204
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 ttaagttcctt tttttgtagg acttttgggg cttatccctt tttttattac tttttcttc 180
 ggattaaata aagccttaac aggtctttta atatcttatg gaaatcaaaag attgggtggat 240
 ggattttattt taaatatgtt aaaaacaggt agtttttcta atcagacaaa aaggattaat 300
 agtttggttg ctttagattc atcacttatt tacttggttt tgcttggtgt atcagtttgg 360
 cttttttatg tttttattca caaaaaaact atttatgggc ttcagcttga aatattaagc 420
 aataaaaaaa agatagacat ttttttcaat ataaatgaat ttaaataataa gtttttcgct 480
 gtatttggca gtgctttttt aaatgggtct gcagggttcta tgtttgtagt gttttttaga 540
 ccatatttgg ttttagggct aacttcagga cttgggttga gtagtctaata tgtagctgta 600
 atttcaggat ttaattatgt ttatgtatta ttttttagct tattgttttc aatattaatt 660
 gaatttaata attttcttaa tataaattat gactttaagt atgaatttat tgggctttgt 720
 caatcaattg ctatttttat ctctttattt ttgattaaag ctaggaaaaa gtag 774

<210> 205
 <211> 364
 <212> PRT
 <213> Homo sapiens

<400> 205
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 20 25 30
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 35 40 45
 Arg Leu Asn Tyr Leu Phe Leu Ser Phe Met Val Phe Leu Val Phe Glu
 50 55 60
 Arg Ile Ser Leu Asn Phe Leu Lys Lys Ser Ile Phe Pro Val Leu Ile
 65 70 75 80
 Ile Thr Leu Phe Leu Ile Met Ala Thr Phe Leu Ser Pro Ser Ile Ser
 85 90 95
 Gly Ala Lys Arg Trp Ile Phe Phe Gln Gly Val Ser Ile Gln Pro Ser
 100 105 110
 Glu Ile Phe Lys Ile Ser Phe Thr Ile Tyr Leu Ser Ala Tyr Leu Ser
 115 120 125
 Lys Phe Asp Pro Arg Lys Asn Asn Gly Ile Ser Tyr Trp Ile Lys Pro
 130 135 140
 Met Leu Ile Phe Ala Ile Phe Trp Val Leu Ile Ile Leu Gln Asn Asp
 145 150 155 160
 Tyr Ser Thr Ala Ile Tyr Phe Ala Ile Leu Phe Phe Ile Val Leu Phe
 165 170 175

Val Ser Asn Met Ala Phe Ser Tyr Val Phe Ala Ile Val Val Thr Phe
 180 185 190
 Leu Pro Val Ser Ala Ile Phe Leu Met Leu Glu Pro Tyr Arg Val Ser
 195 200 205
 Arg Ile Phe Ala Phe Leu Asn Pro Tyr Asp Asp Pro Ser Gly Lys Gly
 210 215 220
 Tyr Gln Ile Ile Ala Ser Leu Asn Ala Leu Lys Ser Gly Gly Ile Leu
 225 230 235 240
 Gly Lys Gly Leu Gly Met Gly Glu Val Lys Leu Gly Lys Leu Pro Glu
 245 250 255
 Ala Asn Ser Asp Phe Ile Phe Ser Val Leu Gly Glu Glu Leu Gly Phe
 260 265 270
 Leu Gly Val Leu Phe Ala Ile Ser Leu Phe Phe Leu Phe Phe Tyr Phe
 275 280 285
 Gly Tyr Phe Ile Ala Ile His Ser Asn Ser Arg Phe Lys Phe Phe Ile
 290 295 300
 Ala Phe Ile Ser Ser Leu Ala Ile Phe Leu Gln Ser Met Met Asn Ile
 305 310 315 320
 Leu Ile Ala Ile Gly Leu Leu Pro Pro Thr Gly Ile Asn Leu Pro Phe
 325 330 335
 Phe Ser Ser Gly Gly Ser Ser Ile Ile Val Thr Met Ala Leu Ser Gly
 340 345 350
 Leu Ile Ser Asn Val Ser Lys Asn Leu Ser Asn Asn
 355 360
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 <211> 300
 <212> PRT
 <213> Homo sapiens
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 Gly Ala Lys Arg Trp Ile Phe Phe Gln Gly Val Ser Ile Gln Pro Ser
 35 40 45
 Glu Ile Phe Lys Ile Ser Phe Thr Ile Tyr Leu Ser Ala Tyr Leu Ser
 50 55 60
 Lys Phe Asp Pro Arg Lys Asn Asn Gly Ile Ser Tyr Trp Ile Lys Pro
 65 70 75 80
 Met Leu Ile Phe Ala Ile Phe Trp Val Leu Ile Ile Leu Gln Asn Asp
 85 90 95

Tyr Ser Thr Ala Ile Tyr Phe Ala Ile Leu Phe Phe Ile Val Leu Phe
 100 105 110
 Val Ser Asn Met Ala Phe Ser Tyr Val Phe Ala Ile Val Val Thr Phe
 115 120 125
 Leu Pro Val Ser Ala Ile Phe Leu Met Leu Glu Pro Tyr Arg Val Ser
 130 135 140
 Arg Ile Phe Ala Phe Leu Asn Pro Tyr Asp Asp Pro Ser Gly Lys Gly
 145 150 155 160
 Tyr Gln Ile Ile Ala Ser Leu Asn Ala Leu Lys Ser Gly Gly Ile Leu
 165 170 175
 Gly Lys Gly Leu Gly Met Gly Glu Val Lys Leu Gly Lys Leu Pro Glu
 180 185 190
 Ala Asn Ser Asp Phe Ile Phe Ser Val Leu Gly Glu Glu Leu Gly Phe
 195 200 205
 Leu Gly Val Leu Phe Ala Ile Ser Leu Phe Phe Leu Phe Phe Tyr Phe
 210 215 220
 Gly Tyr Phe Ile Ala Ile His Ser Asn Ser Arg Phe Lys Phe Phe Ile
 225 230 235 240
 Ala Phe Ile Ser Ser Leu Ala Ile Phe Leu Gln Ser Met Met Asn Ile
 245 250 255
 Leu Ile Ala Ile Gly Leu Leu Pro Pro Thr Gly Ile Asn Leu Pro Phe
 260 265 270
 Phe Ser Ser Gly Gly Ser Ser Ile Ile Val Thr Met Ala Leu Ser Gly
 275 280 285
 Leu Ile Ser Asn Val Ser Lys Asn Leu Ser Asn Asn
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<210> 207
 <211> 1095
 <212> DNA
 <213> Homo sapiens

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 aatccaaatt ttttattttt cacaagactt aattatcttt ttttaagttt tatggttttt 180
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 tttatttttt cagttcttgg agaagaatta ggatttttag gggttttggt tgctataagc 840
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 <212> DNA
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 caagggtgta gcattcaacc ttctgagatt tttaaaatat cttttactat ttatctttca 180
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 atgttgattt ttgcaatttt ttgggtgtta ataattttgc aaaacgatta ttcaacagct 300
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 ggaatgggag aggtaaaact tggaaaatta ccagaggcca attcggattt tattttttca 600
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 tttttttact ttgggtattt tatagctatt cattctaata gtaggtttaa attttttatt 720
 gcatttattt caagtcttgc aatttttctt caaagcatga tgaatatttt aattgcaatc 780
 ggtcttttgc ctctacagg gataaattta ccattttttt catctggggg atcttctatt 840
 attgttacca tggcattgtc tggccttatt tcaaagtgtt caaaaaattt aagtaataat 900
 tga 903

<210> 209
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 209
 Met Lys Val Asn Asn Phe Leu Ser Phe Phe Phe Arg Ala Phe Phe Leu
 1 5 10 15
 Leu Phe Leu Ile Val Ile Leu Phe Phe Phe Val Leu Phe Phe Ile Asp
 20 25 30
 Phe Ile Gly Met Tyr Asn Thr Lys Arg Tyr Phe Pro Glu Phe Val Arg
 35 40 45
 Thr Lys Leu Leu Gly Glu Thr Ser Leu Val Phe Asp His Asn Ser Asn
 50 55 60
 Ile Ile Leu Asp Glu Ala Arg Leu Val Lys Glu Arg Glu Ala Ile Asp
 65 70 75 80
 Ile Lys Asn Gln Gln Ile Glu Lys Leu Lys Glu Asp Leu Lys Leu Lys
 85 90 95
 Glu Asp Ser Leu Asn Lys Leu Glu Phe Glu Leu Lys Gln Lys Gln Lys
 100 105 110
 Asp Leu Asp Leu Lys Gln Lys Ile Ile Asp Asp Ile Ile Asn Lys Tyr
 115 120 125
 Asn Asp Glu Glu Ala Asn Ile Leu Gln Thr Ala Val Tyr Leu Met Asn
 130 135 140

Met Pro Pro Glu Asp Ala Val Lys Arg Leu Glu Asp Leu Asn Pro Glu
 145 150 155 160

Leu Ala Ile Ser Tyr Met Arg Lys Ile Glu Glu Leu Ser Lys Lys Glu
 165 170 175

Gly Arg Leu Ser Ile Val Pro Tyr Trp Leu Ser Leu Met Asp Ser Lys
 180 185 190

Lys Ala Ala Ile Leu Ile Arg Lys Met Ser Val Ser Ser Leu Glu
 195 200 205

<210> 210

<211> 177

<212> PRT

<213> Homo sapiens

<400> 210

Ile Asp Phe Ile Gly Met Tyr Asn Thr Lys Arg Tyr Phe Pro Glu Phe
 1 5 10 15

Val Arg Thr Lys Leu Leu Gly Glu Thr Ser Leu Val Phe Asp His Asn
 20 25 30

Ser Asn Ile Ile Leu Asp Glu Ala Arg Leu Val Lys Glu Arg Glu Ala
 35 40 45

Ile Asp Ile Lys Asn Gln Gln Ile Glu Lys Leu Lys Glu Asp Leu Lys
 50 55 60

Leu Lys Glu Asp Ser Leu Asn Lys Leu Glu Phe Glu Leu Lys Gln Lys
 65 70 75 80

Gln Lys Asp Leu Asp Leu Lys Gln Lys Ile Ile Asp Asp Ile Ile Asn
 85 90 95

Lys Tyr Asn Asp Glu Glu Ala Asn Ile Leu Gln Thr Ala Val Tyr Leu
 100 105 110

Met Asn Met Pro Pro Glu Asp Ala Val Lys Arg Leu Glu Asp Leu Asn
 115 120 125

Pro Glu Leu Ala Ile Ser Tyr Met Arg Lys Ile Glu Glu Leu Ser Lys
 130 135 140

Lys Glu Gly Arg Leu Ser Ile Val Pro Tyr Trp Leu Ser Leu Met Asp
 145 150 155 160

Ser Lys Lys Ala Ala Ile Leu Ile Arg Lys Met Ser Val Ser Ser Leu
 165 170 175

Glu

<210> 211

<211> 624

<212> DNA

<213> Homo sapiens

<400> 211
atgaaagtga ataatttttt atcgtttcttt ttttagggcat tttttttgtt attttttaatt 60
gttatttttat ttttctttgt attattcttt attgatttta ttggaatgta taataactaaa 120
agatatttcc ccgaatttgt aagaaccaag ttgttaggag aaacttctct ggtctttgat 180
cataattcta atataattct tgatgaagct agacttgtga aggaaagaga agctattgat 240
attaagaatc agcagattga aaagcttaaa gaagatctaa agttaaaga agacagtta 300
aataagcttg aatttgagct taagcaaaaag cagaaagatt tagatttaaa acaaaaaata 360
atagatgaca ttataaataa atataatgat gaggaagcaa atattttgca aacagctgta 420
tatttaatga atatgccacc agaagatgct gttaagcggc ttgaagattt aaatcccag 480
cttgcaatat cttatatgcg gaaaattgaa gagctttcca aaaaagaagg tcgtttatca 540
attgttcctt attggttatc tcttatggat tctaaaaaag ctgctatatt gattagaaaa 600
atgtctgtta gttcattgga gtag 624

<210> 212

<211> 534

<212> DNA

<213> Homo sapiens

<400> 212
attgatttta ttggaatgta taataactaaa agatatttcc ccgaatttgt aagaaccaag 60
ttgttaggag aaacttctct ggtctttgat cataattcta atataattct tgatgaagct 120
agacttgtga aggaaagaga agctattgat attaagaatc agcagattga aaagcttaaa 180
gaagatctaa agttaaaga agacagtta aataagcttg aatttgagct taagcaaaaag 240
cagaaagatt tagatttaaa acaaaaaata atagatgaca ttataaataa atataatgat 300
gaggaagcaa atattttgca aacagctgta tatttaatga atatgccacc agaagatgct 360
gttaagcggc ttgaagattt aaatcccag cttgcaatat cttatatgcg gaaaattgaa 420
gagctttcca aaaaagaagg tcgtttatca attgttcctt attggttatc tcttatggat 480
tctaaaaaag ctgctatatt gattagaaaa atgtctgtta gttcattgga gtag 534

<210> 213

<211> 242

<212> PRT

<213> Homo sapiens

<400> 213

Met Leu Thr Tyr Gly Asp Met Val Thr Leu Leu Leu Val Phe Phe Val
1 5 10 15

Thr Met Phe Ser Leu Asn Asp Ile Ile Phe Gln Glu Asn Val Ile Arg
20 25 30

Ile Met Ser Ala Ser Phe Thr Gly Ala Gly Phe Phe Lys Gly Gly Lys
35 40 45

Thr Leu Asp Phe Ser Lys Leu Ser Tyr Leu Ser Asn Ser Phe Met Ser
50 55 60

Leu Pro Ser Thr Val Arg Asn Lys Gln Ala Ser Gln Thr Ala Lys Asn
65 70 75 80

Lys Ser Met Ile Glu Phe Ile Glu Lys Ile Gln Ser Lys Asn Ile Val
85 90 95

Val Arg Gln Glu Glu Arg Gly Ile Val Ile Ser Leu Ala Ala Asp Ala
100 105 110

Phe Phe Asp Ser Ala Ser Ala Asp Val Lys Leu Glu Glu Asn Arg Asp
115 120 125

Ser Ile Gln Lys Ile Ala Ser Phe Ile Gly Phe Leu Ser Pro Arg Gly

130 135 140
 Tyr Asn Phe Lys Ile Glu Gly His Thr Asp Asn Ile Asp Thr Asp Val
 145 150 155 160
 Asn Gly Pro Trp Lys Ser Asn Trp Glu Leu Ser Ala Ala Arg Ser Val
 165 170 175
 Asn Met Leu Glu His Ile Leu Asn Tyr Leu Asp Gln Ser Asp Val Lys
 180 185 190
 Arg Ile Glu Asn Asn Phe Glu Val Ser Gly Phe Gly Gly Ser Arg Pro
 195 200 205
 Ile Ala Thr Asp Asp Thr Pro Glu Gly Arg Ala Tyr Asn Arg Arg Ile
 210 215 220
 Asp Ile Leu Ile Thr Thr Asp Ala Ser Leu Ser Phe Pro Lys Glu Ile
 225 230 235 240

Lys Gln

<210> 214
 <211> 221
 <212> PRT
 <213> Homo sapiens

<400> 214
 Asn Asp Ile Ile Phe Gln Glu Asn Val Ile Arg Ile Met Ser Ala Ser
 1 5 10 15
 Phe Thr Gly Ala Gly Phe Phe Lys Gly Gly Lys Thr Leu Asp Phe Ser
 20 25 30
 Lys Leu Ser Tyr Leu Ser Asn Ser Phe Met Ser Leu Pro Ser Thr Val
 35 40 45
 Arg Asn Lys Gln Ala Ser Gln Thr Ala Lys Asn Lys Ser Met Ile Glu
 50 55 60
 Phe Ile Glu Lys Ile Gln Ser Lys Asn Ile Val Val Arg Gln Glu Glu
 65 70 75 80
 Arg Gly Ile Val Ile Ser Leu Ala Ala Asp Ala Phe Phe Asp Ser Ala
 85 90 95
 Ser Ala Asp Val Lys Leu Glu Glu Asn Arg Asp Ser Ile Gln Lys Ile
 100 105 110
 Ala Ser Phe Ile Gly Phe Leu Ser Pro Arg Gly Tyr Asn Phe Lys Ile
 115 120 125
 Glu Gly His Thr Asp Asn Ile Asp Thr Asp Val Asn Gly Pro Trp Lys
 130 135 140
 Ser Asn Trp Glu Leu Ser Ala Ala Arg Ser Val Asn Met Leu Glu His
 145 150 155 160
 Ile Leu Asn Tyr Leu Asp Gln Ser Asp Val Lys Arg Ile Glu Asn Asn

165 170 175

Phe Glu Val Ser Gly Phe Gly Gly Ser Arg Pro Ile Ala Thr Asp Asp
180 185 190

Thr Pro Glu Gly Arg Ala Tyr Asn Arg Arg Ile Asp Ile Leu Ile Thr
195 200 205

Thr Asp Ala Ser Leu Ser Phe Pro Lys Glu Ile Lys Gln
210 215 220

<210> 215
<211> 729
<212> DNA
<213> Homo sapiens

<400> 215
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ttaaatgata ttatTTTTtca agaaaatgtg ataagaataa tgtctgcttc tttcacgggt 120
gctggatttt tcaagggcgg taaaacttta gatttttagta aattatctta tttgagtaat 180
agcttttatgt ctttgcccttc tactgtgcgc aataaacaag catctcagac tgctaaaaat 240
aaatccatga ttgaatttat tgagaagatt cagtctaaaa atattgtagt taggcaagaa 300
gaaagaggta ttgtaatatc tcttgacgca gatgcatttt ttgattctgc tagtgcagat 360
gttaagcttg aagagaatag agattctatt caaaaaatag catcttttat tggcttttta 420
agtccatagag gctataatTT taaaatagaa gggcatacag ataataattga tactgatgta 480
aatggacctt ggaaaagcaa ttgggaactt tcggctgcta gatctgttaa tatgctggaa 540
catatttttga actattttaga tcaatctgat gttaaaaagaa ttgaaaataa ttttgaagta 600
tctggttttg gtggaagtag gcctattgca acagacgata cccctgaggg tagggccttat 660
aatagaagaa ttgatataatt aattactaca gatgcattct taagtttccc taaggaaatt 720
aagcagtaa 729

<210> 216
<211> 666
<212> DNA
<213> Homo sapiens

<400> 216
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ggattttttca agggcggtaa aacttttagat tttagtaaat tatcttattt gagtaatagc 120
tttatgtctt tgccttctac tgtgcgcaat aaacaagcat ctcagactgc taaaaataaa 180
tccatgattg aattttattga gaagattcag tctaaaaata ttgtagttag gcaagaagaa 240
agaggatttg taatatctct tgcagcagat gcattttttg attctgctag tgcagatggt 300
aagcttgaag agaatagaga ttctattcaa aaaatagcat cttttatttg ctttttaagt 360
cctagaggct ataattttta aatagaaggg catacagata atattgatac tgatgtaaat 420
ggaccttgga aaagcaattg ggaactttcg gctgctagat ctgttaatat gctggaacat 480
attttgaact atttagatca atctgatgtt aaaagaattg aaaataattt tgaagtatct 540
ggtttttggtg gaagtaggcc tattgcaaca gacgataccc ctgagggtag ggcttataat 600
agaagaattg atatattaat tactacagat gcatctttta gtttccctaa ggaaattaag 660
cagtaa 666

<210> 217
<211> 285
<212> PRT
<213> Homo sapiens

<400> 217
Met Arg Met Ser Val Tyr Thr Met Gly Phe Ala Tyr Ile Arg Ser Ile
1 5 10 15

Met Gly Tyr Val Val Leu Phe Phe Phe Ala Ser Leu Ala Val Asn Phe

	20		25		30
Phe Val Asn Ile Ile Gln Val Gly Phe Phe Ile Thr Phe Lys Ser Leu					
	35		40		45
Glu Pro Arg Trp Asp Lys Ile Ser Phe Asn Phe Ser Arg Trp Ala Lys					
	50		55		60
Asn Ser Phe Phe Ser Ala Gly Ala Phe Phe Asn Leu Phe Lys Ser Leu					
	65		70		75
Leu Lys Val Val Ile Ile Cys Leu Ile Tyr Tyr Phe Ile Ile Glu Asn					
		85		90	95
Asn Ile Gly Lys Ile Ser Lys Leu Ser Glu Tyr Thr Leu Gln Ser Gly					
	100		105		110
Ile Ser Ile Val Leu Val Ile Ala Tyr Lys Ile Cys Phe Phe Ser Val					
	115		120		125
Met Phe Leu Ala Ile Val Gly Val Phe Asp Tyr Leu Phe Gln Arg Ser					
	130		135		140
Gln Tyr Ile Glu Ser Leu Lys Met Thr Lys Glu Glu Val Lys Gln Glu					
	145		150		155
Arg Lys Glu Met Glu Gly Asp Pro Leu Leu Arg Ser Arg Ile Lys Glu					
		165		170	175
Arg Met Arg Val Ile Leu Ser Thr Asn Leu Arg Val Ala Ile Pro Gln					
	180		185		190
Ala Asp Val Val Ile Thr Asn Pro Glu His Phe Ala Val Ala Ile Lys					
	195		200		205
Trp Asp Ser Glu Thr Met Leu Ala Pro Lys Val Leu Ala Lys Gly Gln					
	210		215		220
Asp Glu Ile Ala Leu Thr Ile Lys Lys Ile Ala Arg Glu Asn Asn Val					
	225		230		235
Pro Leu Met Glu Asn Lys Leu Leu Ala Arg Ala Leu Tyr Ala Asn Val					
		245		250	255
Lys Val Asn Glu Glu Ile Pro Arg Glu Tyr Trp Glu Ile Val Ser Lys					
	260		265		270
Ile Leu Val Arg Val Tyr Ser Ile Thr Lys Lys Phe Asn					
	275		280		285
<210> 218					
<211> 253					
<212> PRT					
<213> Homo sapiens					
<400> 218					
Phe Val Asn Ile Ile Gln Val Gly Phe Phe Ile Thr Phe Lys Ser Leu					
	1		5		10
					15
Glu Pro Arg Trp Asp Lys Ile Ser Phe Asn Phe Ser Arg Trp Ala Lys					

20										25										30																																		
Asn	Ser	Phe	Phe	Ser	Ala	Gly	Ala	Phe	Phe	Asn	Leu	Phe	Lys	Ser	Leu																																							
		35					40					45																																										
Leu	Lys	Val	Val	Ile	Ile	Cys	Leu	Ile	Tyr	Tyr	Phe	Ile	Ile	Glu	Asn																																							
	50					55					60																																											
Asn	Ile	Gly	Lys	Ile	Ser	Lys	Leu	Ser	Glu	Tyr	Thr	Leu	Gln	Ser	Gly																																							
	65				70					75					80																																							
Ile	Ser	Ile	Val	Leu	Val	Ile	Ala	Tyr	Lys	Ile	Cys	Phe	Phe	Ser	Val																																							
				85				90						95																																								
Met	Phe	Leu	Ala	Ile	Val	Gly	Val	Phe	Asp	Tyr	Leu	Phe	Gln	Arg	Ser																																							
			100					105					110																																									
Gln	Tyr	Ile	Glu	Ser	Leu	Lys	Met	Thr	Lys	Glu	Glu	Val	Lys	Gln	Glu																																							
	115					120						125																																										
Arg	Lys	Glu	Met	Glu	Gly	Asp	Pro	Leu	Leu	Arg	Ser	Arg	Ile	Lys	Glu																																							
	130					135					140																																											
Arg	Met	Arg	Val	Ile	Leu	Ser	Thr	Asn	Leu	Arg	Val	Ala	Ile	Pro	Gln																																							
	145				150				155					160																																								
Ala	Asp	Val	Val	Ile	Thr	Asn	Pro	Glu	His	Phe	Ala	Val	Ala	Ile	Lys																																							
				165				170					175																																									
Trp	Asp	Ser	Glu	Thr	Met	Leu	Ala	Pro	Lys	Val	Leu	Ala	Lys	Gly	Gln																																							
			180				185						190																																									
Asp	Glu	Ile	Ala	Leu	Thr	Ile	Lys	Lys	Ile	Ala	Arg	Glu	Asn	Asn	Val																																							
	195						200					205																																										
Pro	Leu	Met	Glu	Asn	Lys	Leu	Leu	Ala	Arg	Ala	Leu	Tyr	Ala	Asn	Val																																							
	210					215					220																																											
Lys	Val	Asn	Glu	Glu	Ile	Pro	Arg	Glu	Tyr	Trp	Glu	Ile	Val	Ser	Lys																																							
	225				230				235					240																																								
Ile	Leu	Val	Arg	Val	Tyr	Ser	Ile	Thr	Lys	Lys	Phe	Asn																																										
				245				250																																														

<210> 219
 <211> 858
 <212> DNA
 <213> Homo sapiens

<400> 219
 atgcgtatga gtgtttatatac tatgggtttt gcatatatta gatctatcat ggggtatgtc 60
 gttttgtttt ttttcgcatac ttttagctgtt aatttttttg ttaatatattat tcaagtaggc 120
 ttttttatta cttttaaatc ttttgagcca aggtgggata aaattagttt taatttttcc 180
 agatgggcaa aaaattcttt tttttcagca ggggcttttt tcaatttggt taaaagtttg 240
 ttaaaagttg ttataatatg cttgatatat tattttatta tagaaaacaa tataggcaaa 300
 atttctaagc tttcggagta tacacttcaa tctggaattt ctattgtgtt agtgattgcc 360
 tataagatat gttttttttc agtaatgttt ttggcaattg taggggtgtt tgattatttg 420
 tttcaaagat ctcagtacat tgagagtttg aaaatgacaa aagaagaggt aaagcaggaa 480
 agaaaggaaa tggaaggtga tcctttactt cgatctagaa taaaagagag aatgagggtt 540
 attttaagta ccaatttaag agtagctatt cctcaagcag atgtagtaat tacaaatcca 600

gaacattttg cagttgctat taaatgggat agcgaaacaa tgtagctcc aaaggtgctt 660
gcaaaaggctc aagatgaaat agctctcaca attaaaaaaa ttgcaagaga aaataatggt 720
cctttaatgg aaaataagct ccttgcaaga gctctttatg ctaatgttaa ggtaaatgaa 780
gagattccaa gagaatattg ggagattggt tcaaaaattc ttgtgagagt atattctatt 840
actaaaaagt ttaattag 858

<210> 220

<211> 762

<212> DNA

<213> Homo sapiens

<400> 220

tttgtaata ttattcaagt aggcctttttt attactttta aatcctttgga gccaaagggtg 60
gataaaatta gttttaattt ttccagatgg gcaaaaaatt cttttttttc agcaggggct 120
tttttcaatt tgtttaaaag tttgttaaaa gttgttataa tatgcttgat atattatttt 180
attatagaaa acaatatagg caaaatttct aagctttcgg agtatacact tcaatctgga 240
atttctattg tgtagtgat tgcctataag atatgttttt tttcagtaat gtttttgga 300
attgtagggg tgtttgatta tttgtttcaa agatctcagt acattgagag tttgaaaatg 360
acaaaagaag aggtaaagca ggaaagaaag gaaatggaag gtgatccttt acttcgatct 420
agaataaaag agagaatgag gggtatttta agtaccaatt taagagtagc tattcctcaa 480
gcagatgtag taattacaaa tccagaacat tttgcagttg ctattaaatg ggatagcgaa 540
acaatgttag ctccaaagggt gcttgcaaaa ggtcaagatg aaatagctct cacaattaaa 600
aaaattgcaa gagaaaataa tggtccttta atggaaaata agctccttgc aagagctctt 660
tatgctaatt ttaagggttaa tgaagagatt ccaagagaat attgggagat tgtttcaaaa 720
attcctgtga gagtatattc tattactaaa aagttaatt ag 762

<210> 221

<211> 155

<212> PRT

<213> Homo sapiens

<400> 221

Met Phe Thr Leu Ser Phe Val Leu Ile Asn Phe Ile Ile Thr Gly Ile
1 5 10 15

Leu Ile Leu Met Leu Glu Phe Asn Phe Leu Lys Val Asp Phe Lys Gly
20 25 30

Asn Ile Leu Leu Ala Gly Ile Phe Met Gly Leu Met Gln Gly Leu Gly
35 40 45

Ala Leu Pro Gly Ile Ser Arg Ser Gly Ile Thr Ile Phe Ser Ala Ser
50 55 60

Val Ile Gly Phe Asn Arg Lys Ser Ala Phe Glu Ile Ser Phe Leu Ser
65 70 75 80

Leu Ile Pro Ile Val Phe Gly Ala Ile Leu Leu Lys His Lys Glu Phe
85 90 95

Tyr Asp Ile Phe Met Val Leu Asn Phe Phe Glu Ile Asn Leu Gly Ala
100 105 110

Leu Val Ala Phe Val Val Gly Ile Phe Ser Ile Asn Phe Phe Phe Lys
115 120 125

Met Leu Asn Asn Lys Lys Leu Tyr Tyr Phe Ser Ile Tyr Leu Phe Ala
130 135 140

Leu Ser Ile Ile Val Cys Tyr Phe Val Arg Ile

145

150

155

<210> 222
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 222

Ile Thr Gly Ile Leu Ile Leu Met Leu Glu Phe Asn Phe Leu Lys Val
 1 5 10 15

Asp Phe Lys Gly Asn Ile Leu Leu Ala Gly Ile Phe Met Gly Leu Met
 20 25 30

Gln Gly Leu Gly Ala Leu Pro Gly Ile Ser Arg Ser Gly Ile Thr Ile
 35 40 45

Phe Ser Ala Ser Val Ile Gly Phe Asn Arg Lys Ser Ala Phe Glu Ile
 50 55 60

Ser Phe Leu Ser Leu Ile Pro Ile Val Phe Gly Ala Ile Leu Leu Lys
 65 70 75 80

His Lys Glu Phe Tyr Asp Ile Phe Met Val Leu Asn Phe Phe Glu Ile
 85 90 95

Asn Leu Gly Ala Leu Val Ala Phe Val Val Gly Ile Phe Ser Ile Asn
 100 105 110

Phe Phe Phe Lys Met Leu Asn Asn Lys Lys Leu Tyr Tyr Phe Ser Ile
 115 120 125

Tyr Leu Phe Ala Leu Ser Ile Ile Val Cys Tyr Phe Val Arg Ile
 130 135 140

<210> 223
 <211> 468
 <212> DNA
 <213> Homo sapiens

<400> 223

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 ctagaattta attttttaaa agttgatttt aaaggtaata ttttgtagc aggaattttt 120
 atggggctga tgcaaggcct gggtgcgctt ccaggaatct ctcgttcagg aattacgatc 180
 ttttcggcat cggttattgg atttaataga aaaagtgcac ttgaaatttc atttttatct 240
 ttaattccaa tagtttttgg agcgatttta ttaaaacata aagaatttta tgatattttt 300
 atggttttta atttttttga aataaactta ggagcattag ttgcttttgt tgttggtatt 360
 ttctcaataa atttcttttt taaaatgctt aataacaaaa aactgtatta tttttctata 420
 tatttatattg cactttcaat tatagtttgt tattttgtta gaatatga 468

<210> 224
 <211> 432
 <212> DNA
 <213> Homo sapiens

<400> 224

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 aatattttgt tagcaggaat ttttatgggg ctgatgcaag gcttgggtgc gcttccagga 120
 atctctcggt caggaattac gatcttttcg gcacgcgtta ttggatttaa tagaaaaagt 180
 gcatttgaaa tttcattttt atctttaatt ccaatagttt ttggagcgat tttattaaaa 240

cataaagaat tttatgatat ttttatgggt ttaaattttt ttgaaataaa cttaggagca 300
 ttagttgctt ttgttggtgg tattttctca ataaatttct tttttaaact gcttaataac 360
 aaaaaactgt attatttttc tatatatatta tttgcacttt caattatagt ttgttatttt 420
 gttagaatat ga 432

<210> 225
 <211> 507
 <212> PRT
 <213> Homo sapiens

<400> 225
 Met Ile Val Leu Leu Ile Ser Ile Gly Cys Ala Asn Ala Val His Ile
 1 5 10 15
 Ile Asn Glu Ile Phe Lys Leu Ile Lys Lys Glu Gln Leu Ser Lys Glu
 20 25 30
 Ser Ile Lys Ala Thr Ile Lys Lys Leu Lys Thr Pro Ile Leu Leu Thr
 35 40 45
 Ser Phe Thr Thr Ala Phe Gly Phe Leu Ser Leu Thr Thr Ser Ser Ile
 50 55 60
 Asn Ala Tyr Lys Thr Met Gly Ile Phe Met Ser Ile Gly Val Ile Ile
 65 70 75 80
 Ser Met Ile Ile Ser Leu Thr Val Leu Pro Gly Ile Ile Thr Leu Ile
 85 90 95
 Pro Phe Ala Lys Lys Lys Ser Phe Glu Lys Glu Lys Glu Asn Lys Leu
 100 105 110
 Asn Lys Ile Ser Phe Leu Glu Arg Leu Ala Lys Leu Asn Thr Gln Ile
 115 120 125
 Thr Lys Ser Ile Leu Lys Arg Lys Tyr Thr Ser Ser Ile Met Val Leu
 130 135 140
 Ile Ile Leu Gly Ile Ser Phe Val Gly Leu Leu Lys Ile Glu Ile Asn
 145 150 155 160
 Phe Asp Glu Lys Asp Tyr Phe Lys Glu Ser Thr Ser Val Lys Lys Thr
 165 170 175
 Leu Asn Leu Met Gln Lys Glu Met Gly Gly Ile Ser Ile Phe Lys Ile
 180 185 190
 Glu Ile Glu Gly Arg Pro Gly Glu Phe Lys Asn Ala Lys Ala Met Gln
 195 200 205
 Ile Leu Asp Leu Ile Thr Asp Lys Leu Asp Ala Phe Ser Ala Lys Thr
 210 215 220
 Gln Ser Ser Ser Ile Asn Gly Ile Leu Lys Phe Thr Asn Phe Lys Ile
 225 230 235 240
 Lys Lys Glu Ser Pro Leu Glu Tyr Lys Leu Pro Glu Asn Lys Ile Ile
 245 250 255
 Leu Asn Lys Leu Ile Asn Leu Ile Asp Lys Ser Asp Trp Thr Lys Asp

260										265										270																																		
Asn	Lys	Arg	Met	Tyr	Ile	Asn	Asp	Asp	Trp	Ser	Leu	Ile	Ser	Ile	Ile																																							
275										280										285																																		
Val	Arg	Ile	Glu	Asp	Asn	Ser	Thr	Glu	Gly	Ile	Lys	Lys	Phe	Glu	Lys																																							
290										295										300																																		
Tyr	Ala	Ile	Asn	Thr	Ile	Asn	Glu	Tyr	Met	Lys	Asn	Asn	Lys	Tyr	His																																							
305										310										315										320																								
Phe	Ser	Gly	Val	Tyr	Asp	Lys	Val	Leu	Ile	Ala	Lys	Thr	Met	Val	Lys																																							
325										330										335																																		
Glu	Gln	Val	Ile	Asn	Ile	Ile	Thr	Thr	Leu	Gly	Ser	Ile	Thr	Leu	Leu																																							
340										345										350																																		
Leu	Met	Phe	Phe	Phe	Lys	Ser	Ile	Lys	Thr	Gly	Ile	Ile	Ile	Ala	Ile																																							
355										360										365																																		
Pro	Val	Ala	Trp	Ser	Val	Phe	Leu	Asn	Phe	Ala	Val	Met	Arg	Leu	Phe																																							
370										375										380																																		
Gly	Ile	Thr	Leu	Asn	Pro	Ala	Thr	Ala	Thr	Ile	Ala	Ser	Val	Ser	Met																																							
385										390										395										400																								
Gly	Val	Gly	Val	Asp	Tyr	Ser	Ile	His	Phe	Phe	Asn	Thr	Phe	Ile	Leu																																							
405										410										415																																		
Gln	Tyr	Gln	Lys	Asn	Gln	Ile	Tyr	Lys	Thr	Ala	Leu	Leu	Glu	Ser	Ile																																							
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Pro	Asn	Val	Phe	Asn	Gly	Ile	Phe	Ala	Asn	Ser	Ile	Ser	Val	Gly	Ile																																							
435										440										445																																		
Gly	Phe	Leu	Thr	Leu	Thr	Phe	Ser	Ser	Tyr	Lys	Ile	Ile	Ser	Thr	Leu																																							
450										455										460																																		
Gly	Ala	Ile	Ile	Ala	Phe	Thr	Met	Leu	Thr	Thr	Ser	Leu	Ala	Ser	Leu																																							
465										470										475										480																								
Thr	Leu	Leu	Pro	Leu	Leu	Ile	Tyr	Leu	Phe	Lys	Pro	Arg	Val	Lys	Leu																																							
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<210> 226
 <211> 441
 <212> PRT
 <213> Homo sapiens

<400> 226
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 Ala Lys Lys Lys Ser Phe Glu Lys Glu Lys Glu Asn Lys Leu Asn Lys

35					40					45					
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50						55					60				
Ser	Ile	Leu	Lys	Arg	Lys	Tyr	Thr	Ser	Ser	Ile	Met	Val	Leu	Ile	Ile
65					70					75					80
Leu	Gly	Ile	Ser	Phe	Val	Gly	Leu	Leu	Lys	Ile	Glu	Ile	Asn	Phe	Asp
				85					90					95	
Glu	Lys	Asp	Tyr	Phe	Lys	Glu	Ser	Thr	Ser	Val	Lys	Lys	Thr	Leu	Asn
			100					105					110		
Leu	Met	Gln	Lys	Glu	Met	Gly	Gly	Ile	Ser	Ile	Phe	Lys	Ile	Glu	Ile
		115					120					125			
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	130					135					140				
Asp	Leu	Ile	Thr	Asp	Lys	Leu	Asp	Ala	Phe	Ser	Ala	Lys	Thr	Gln	Ser
145					150					155					160
Ser	Ser	Ile	Asn	Gly	Ile	Leu	Lys	Phe	Thr	Asn	Phe	Lys	Ile	Lys	Lys
				165					170					175	
Glu	Ser	Pro	Leu	Glu	Tyr	Lys	Leu	Pro	Glu	Asn	Lys	Ile	Ile	Leu	Asn
			180					185						190	
Lys	Leu	Ile	Asn	Leu	Ile	Asp	Lys	Ser	Asp	Trp	Thr	Lys	Asp	Asn	Lys
		195					200					205			
Arg	Met	Tyr	Ile	Asn	Asp	Asp	Trp	Ser	Leu	Ile	Ser	Ile	Ile	Val	Arg
	210					215					220				
Ile	Glu	Asp	Asn	Ser	Thr	Glu	Gly	Ile	Lys	Lys	Phe	Glu	Lys	Tyr	Ala
225					230					235					240
Ile	Asn	Thr	Ile	Asn	Glu	Tyr	Met	Lys	Asn	Asn	Lys	Tyr	His	Phe	Ser
				245					250					255	
Gly	Val	Tyr	Asp	Lys	Val	Leu	Ile	Ala	Lys	Thr	Met	Val	Lys	Glu	Gln
			260					265					270		
Val	Ile	Asn	Ile	Ile	Thr	Thr	Leu	Gly	Ser	Ile	Thr	Leu	Leu	Leu	Met
		275					280					285			
Phe	Phe	Phe	Lys	Ser	Ile	Lys	Thr	Gly	Ile	Ile	Ile	Ala	Ile	Pro	Val
	290					295					300				
Ala	Trp	Ser	Val	Phe	Leu	Asn	Phe	Ala	Val	Met	Arg	Leu	Phe	Gly	Ile
305					310					315					320
Thr	Leu	Asn	Pro	Ala	Thr	Ala	Thr	Ile	Ala	Ser	Val	Ser	Met	Gly	Val
				325					330					335	
Gly	Val	Asp	Tyr	Ser	Ile	His	Phe	Phe	Asn	Thr	Phe	Ile	Leu	Gln	Tyr
			340					345					350		
Gln	Lys	Asn	Gln	Ile	Tyr	Lys	Thr	Ala	Leu	Leu	Glu	Ser	Ile	Pro	Asn

355

360

365

Val Phe Asn Gly Ile Phe Ala Asn Ser Ile Ser Val Gly Ile Gly Phe
370 375 380

Leu Thr Leu Thr Phe Ser Ser Tyr Lys Ile Ile Ser Thr Leu Gly Ala
385 390 395 400

Ile Ile Ala Phe Thr Met Leu Thr Thr Ser Leu Ala Ser Leu Thr Leu
405 410 415

Leu Pro Leu Leu Ile Tyr Leu Phe Lys Pro Arg Val Lys Leu Ala Ser
420 425 430

Asn Asn Asn Phe Lys Lys Leu Lys Gln
435 440

<210> 227

<211> 1524

<212> DNA

<213> Homo sapiens

<400> 227

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acctcttcaa ttaatgccta caaaacaatg ggtattttca tgtcaattgg agtaattatc 240
tcaatgataa tctcattaac cgttttacct ggaataataa cattaatccc atttgcaaaa 300
aaaaagtctt ttgaaaaaga aaaagaaaat aaactaaata aaatatcctt ccttgaaaga 360
cttgccaaac taaatacgca aataacaaaa tctatattaa aaagaaaata tacatcctct 420
ataatggtcc tcatcatact gggaatttct tttgtaggtc ttttaaaaat cgaaatcaat 480
tttgatgaaa aagattactt taaagaaagc acaagtgtaa aaaaaacatt aaacctaatt 540
caaaaagaaa tggggggaat atcgattttc aaaatagaaa ttgaaggcag gcccggtgaa 600
tttaaaaatg cttaaagcaat gcaaataatta gacttaatta cagataagct tgatgcattt 660
tctgcaaaaa ctcaatctag ttctattaat ggcattttta aaattacaaa ttttaaaatt 720
aaaaaagaat cccactaga gtataaaactg cctgaaaata aaattatact aaacaaacta 780
ataaatttga tagataaaag cgattggact aaggacaata aaagaatgta cattaacgat 840
gactggtcat taatatctat catagtaaga attgaagaca actcaaccga aggaataaaa 900
aaatttgaaa aatatgctat taacacaatt aatgaatata tgaaaaataa taaatatcat 960
ttctcaggtg tttatgataa ggtattaata gctaaaacaa tggtaaaaga acagggtata 1020
aacattataa caactcttgg atcaataaca ctactactta tgtttttctt taaatctata 1080
aaaaccggaa taattattgc aatcccagta gcatggctcag tgttttttaa ctttgctgta 1140
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aatcaaatct acaaaaactgc acttcttgaa tcaataccca atgtatttaa tgggaatatt 1320
gcaaattcta tttctgttgg aataggattt ttaactctaa cattttcgtc ttataaaata 1380
atatcaactc ttggagcaat aattgctttt acaatgctaa cgacatctct tgcatacata 1440
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<210> 228

<211> 1326

<212> DNA

<213> Homo sapiens

<400> 228

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gaaaaagaaa ataaactaaa taaaatatcc ttccttgaaa gacttgccaa actaaatacg 180
caaataacaa aatctatatt aaaaagaaaa tatacatcct ctataatggt cctcatcata 240

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ctgggaattt cttttgtagg tcttttaaaa atcgaaatca attttgatga aaaagattac 300
 tttaaagaaa gcacaagtgt aaaaaaaaca ttaaaccctaa tgcaaaaaga aatgggggga 360
 atatcgattt tcaaaaataga aattgaaggc aggcccgggtg aattttaaaaa tgctaaagca 420
 atgcaaatat tagacttaat tacagataag cttgatgcat tttctgcaaa aactcaatct 480
 agttctatta atggcatttt aaaaatttaca aatttttaaaa ttaaaaaaga atccccacta 540
 gagtataaac tgcctgaaaa taaaattata ctaaacaac taataaattt gatagataaa 600
 agcgattgga ctaaggacaa taaaagaatg tacattaacg atgactgggtc attaatatct 660
 atcatagtaa gaattgaaga caactcaacc gaaggaataa aaaaatttga aaaatatgct 720
 attaacacaa ttaatgaata tatgaaaaat aataaatatc atttctcagg tgtttatgat 780
 aaggtattaa tagctaaaac aatggtaaaa gaacagggtta taaacattat aacaactctt 840
 ggatcaataa cactactact tatgtttttc tttaaatcta taaaaaccgg aataattatt 900
 gcaatcccag tagcatgggtc agtgttttta aactttgctg taatgagatt atttgggata 960
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 tcaattcatt ttttcaatac atttattttt caataccaaa aaaatcaaat ctacaaaact 1080
 gcacttcttg aatcaatacc caatgtattt aatggaatat ttgcaaattc tatttctgtt 1140
 ggaataggat ttttaactct aacattttcg tcttataaaa taatatcaac tcttggagca 1200
 ataattgctt ttacaatgct aacgacatct cttgcatcac taactcttct tccattatta 1260
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<210> 229

<211> 254

<212> PRT

<213> Homo sapiens

<400> 229

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 20 25 30

Phe Ser Ser Ser Pro Glu Ile Pro Gly Glu Ile Ile Lys Gly Gly Tyr
 35 40 45

Thr Asn Ile Val Phe Gly Trp Gly Leu Gly Val Thr Phe Gly Ile Tyr
 50 55 60

Thr Ala Ala Arg Met Ser Gly Ala His Leu Asn Pro Ala Val Ser Ile
 65 70 75 80

Gly Leu Ala Ser Val Gly Lys Phe Pro Val Ser Lys Leu Leu His Tyr
 85 90 95

Ile Val Ala Gln Ile Leu Gly Ala Phe Thr Gly Ala Leu Met Thr Leu
 100 105 110

Val Val Phe Tyr Pro Lys Trp Ile Glu Met Asp Pro Gly Leu Glu Asn
 115 120 125

Thr Gln Gly Ile Met Ala Thr Phe Pro Ala Val Pro Gly Phe Leu Pro
 130 135 140

Gly Phe Ile Asp Gln Ile Phe Gly Thr Phe Leu Leu Met Phe Leu Ile
 145 150 155 160

Ser Val Val Gly Asp Phe Thr Lys Lys His Ser Asp Asn Pro Phe Ile
 165 170 175

Pro Phe Ile Val Gly Ala Val Val Leu Ser Ile Gly Ile Ser Phe Gly

180				185				190							
Gly	Met	Asn	Gly	Tyr	Ala	Ile	Asn	Pro	Ala	Arg	Asp	Leu	Gly	Pro	Arg
		195					200					205			
Ile	Leu	Leu	Leu	Phe	Ala	Gly	Phe	Lys	Asn	His	Gly	Phe	Asn	Asn	Leu
	210					215					220				
Ser	Ile	Val	Ile	Val	Pro	Ile	Ile	Gly	Pro	Ile	Ile	Gly	Ala	Ile	Leu
225					230					235					240
Gly	Ala	Thr	Ile	Tyr	Glu	Phe	Thr	Leu	Lys	Asn	Asn	Lys	Asp		
				245					250						
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<211> 214															
<212> PRT															
<213> Homo sapiens															
<400> 230															
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			20					25					30		
His	Leu	Asn	Pro	Ala	Val	Ser	Ile	Gly	Leu	Ala	Ser	Val	Gly	Lys	Phe
		35					40					45			
Pro	Val	Ser	Lys	Leu	Leu	His	Tyr	Ile	Val	Ala	Gln	Ile	Leu	Gly	Ala
	50					55					60				
Phe	Thr	Gly	Ala	Leu	Met	Thr	Leu	Val	Val	Phe	Tyr	Pro	Lys	Trp	Ile
65					70					75					80
Glu	Met	Asp	Pro	Gly	Leu	Glu	Asn	Thr	Gln	Gly	Ile	Met	Ala	Thr	Phe
				85					90					95	
Pro	Ala	Val	Pro	Gly	Phe	Leu	Pro	Gly	Phe	Ile	Asp	Gln	Ile	Phe	Gly
			100					105					110		
Thr	Phe	Leu	Leu	Met	Phe	Leu	Ile	Ser	Val	Val	Gly	Asp	Phe	Thr	Lys
		115					120					125			
Lys	His	Ser	Asp	Asn	Pro	Phe	Ile	Pro	Phe	Ile	Val	Gly	Ala	Val	Val
	130					135					140				
Leu	Ser	Ile	Gly	Ile	Ser	Phe	Gly	Gly	Met	Asn	Gly	Tyr	Ala	Ile	Asn
145					150					155					160
Pro	Ala	Arg	Asp	Leu	Gly	Pro	Arg	Ile	Leu	Leu	Leu	Phe	Ala	Gly	Phe
				165					170					175	
Lys	Asn	His	Gly	Phe	Asn	Asn	Leu	Ser	Ile	Val	Ile	Val	Pro	Ile	Ile
			180					185					190		
Gly	Pro	Ile	Ile	Gly	Ala	Ile	Leu	Gly	Ala	Thr	Ile	Tyr	Glu	Phe	Thr
		195					200					205			
Leu Lys Asn Asn Lys Asp															

210

<210> 231
<211> 765
<212> DNA
<213> Homo sapiens

<400> 231
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ggagaaataa taaaaggagg atatacaaat atagtatttg gatggggatt ggggtgtaacg 180
tttggatatt acacagcagc aagaatgagc ggagcacacc taaaccagc tgtagcata 240
ggattagcaa gtgttggaat gtttcccggt tcaaaacttt tacattacat tgtagcacia 300
atattaggag cttttacagg tgcattaatg acacttgctg tattttatcc taaatggata 360
gaaatggatc ctggcttaga aaatactcaa ggaataatgg caactttccc tgctgttcct 420
ggatttttgc ctggatttat tgatcaaatt tttggaactt ttttgctaatt gtttttaatt 480
tctgttggtg gagattttac aaaaaaacac agcgacaatc catttattcc ttttattgta 540
ggagcagtgg ttttatcaat agggataagt ttcggaggaa tgaacgggta tgctattaat 600
cctgcaaggg atctgggacc aagaatttta ctcttatttg ctggatttaa aaatcacgga 660
tttaacaatc taagtatatg tattgtacca ataattggcc caataattgg agcaattttg 720
ggagctacaa tttacgaatt tacactaaaa aataacaaag actaa 765

<210> 232
<211> 645
<212> DNA
<213> Homo sapiens

<400> 232
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ggattagcaa gtgttggaat gtttcccggt tcaaaacttt tacattacat tgtagcacia 180
atattaggag cttttacagg tgcattaatg acacttgctg tattttatcc taaatggata 240
gaaatggatc ctggcttaga aaatactcaa ggaataatgg caactttccc tgctgttcct 300
ggatttttgc ctggatttat tgatcaaatt tttggaactt ttttgctaatt gtttttaatt 360
tctgttggtg gagattttac aaaaaaacac agcgacaatc catttattcc ttttattgta 420
ggagcagtgg ttttatcaat agggataagt ttcggaggaa tgaacgggta tgctattaat 480
cctgcaaggg atctgggacc aagaatttta ctcttatttg ctggatttaa aaatcacgga 540
tttaacaatc taagtatatg tattgtacca ataattggcc caataattgg agcaattttg 600
ggagctacaa tttacgaatt tacactaaaa aataacaaag actaa 645

<210> 233
<211> 256
<212> PRT
<213> Homo sapiens

<400> 233
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20 25 30
Leu Ala Ile Phe Tyr Tyr Glu Val Gly Gln Arg Tyr Ile Asn Val Gly
35 40 45
Lys Ile Lys Lys Gly Lys Leu Phe Gln Ala Lys Ala Leu Lys Ile Tyr
50 55 60
Pro Asp Leu Lys Lys Gly Phe Asp Ile Lys Leu Ala Val Lys Glu Leu
65 70 75 80

Asp Ala Arg Ile Lys Asp Asp Asn Pro Lys Val Val Met Leu Glu Asp
85 90 95

Ile Lys Leu Glu Glu Ile Pro Gly Ile Val His Glu Lys Ile Glu Ile
100 105 110

Asn Asp Phe Thr Asn Ala Pro Lys Ile Glu Tyr Ile Ala Gln Arg Glu
115 120 125

Arg Ser Lys Asn Gln Asp Lys Ile Ile Lys Phe Gln Phe Gly Lys Phe
130 135 140

Ala Arg Ala Leu Ile Ser Arg Asn Phe Asp Leu Phe Asp Ser Val Ile
145 150 155 160

Ala Asp Lys Val Asn Val Met Gly Gln Phe Glu Ser Lys Asn Asp Phe
165 170 175

Ile Ser Thr Leu Ser Ser Ala Ser Ser Lys Ala Asp Ala Asp Glu Leu
180 185 190

Glu Tyr Leu Ser Val Asp Asp Tyr Tyr Asp Leu Lys Ser Leu Lys Ile
195 200 205

Ser Lys Ser Asn Asp Thr Ser Phe Ala Val Asn Val Asn Ala Lys Lys
210 215 220

Asn Asp Val Thr Lys Asn Phe Pro Phe Trp Lys Glu Arg Gln Thr Leu
225 230 235 240

Ile Phe Thr Thr Glu Asp Asp Asn Asn Trp Phe Leu Ser Ser Ile Asn
245 250 255

<210> 234

<211> 256

<212> PRT

<213> Homo sapiens

<400> 234

Met Arg Arg Leu Phe Leu Leu Tyr Ile Leu Cys Ser Phe Val Phe Leu
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Asn Leu Phe Ala Gln Gly Ser Ser Ser Tyr Ile Asp Lys Gln Lys Glu
20 25 30

Leu Ala Ile Phe Tyr Tyr Glu Val Gly Gln Arg Tyr Ile Asn Val Gly
35 40 45

Lys Ile Lys Lys Gly Lys Leu Phe Gln Ala Lys Ala Leu Lys Ile Tyr
50 55 60

Pro Asp Leu Lys Lys Gly Phe Asp Ile Lys Leu Ala Val Lys Glu Leu
65 70 75 80

Asp Ala Arg Ile Lys Asp Asp Asn Pro Lys Val Val Met Leu Glu Asp
85 90 95

Ile Lys Leu Glu Glu Ile Pro Gly Ile Val His Glu Lys Ile Glu Ile
100 105 110

Asn Asp Phe Thr Asn Ala Pro Lys Ile Glu Tyr Ile Ala Gln Arg Glu
115 120 125

Arg Ser Lys Asn Gln Asp Lys Ile Ile Lys Phe Gln Phe Gly Lys Phe
130 135 140

Ala Arg Ala Leu Ile Ser Arg Asn Phe Asp Leu Phe Asp Ser Val Ile
145 150 155 160

Ala Asp Lys Val Asn Val Met Gly Gln Phe Glu Ser Lys Asn Asp Phe
165 170 175

Ile Ser Thr Leu Ser Ser Ala Ser Ser Lys Ala Asp Ala Asp Glu Leu
180 185 190

Glu Tyr Leu Ser Val Asp Asp Tyr Tyr Asp Leu Lys Ser Leu Lys Ile
195 200 205

Ser Lys Ser Asn Asp Thr Ser Phe Ala Val Asn Val Asn Ala Lys Lys
210 215 220

Asn Asp Val Thr Lys Asn Phe Pro Phe Trp Lys Glu Arg Gln Thr Leu
225 230 235 240

Ile Phe Thr Thr Glu Asp Asp Asn Asn Trp Phe Leu Ser Ser Ile Asn
245 250 255

<210> 235

<211> 771

<212> DNA

<213> Homo sapiens

<400> 235

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ggtcaaagat atataaacgt tggtaaaatt aaaaaaggaa agctttttca agcaaaagct 180
ttaaagattt atccagattt gaaaaagggg tttgatatca agcttgcagt taaagagctt 240
gatgctagga ttaaagatga caatcccaag gttgttatgc ttgaggatat taagcttgag 300
gagatacctg gaatagtgca cgaaaaaata gaaatcaatg attttacaaa tgctcctaaa 360
atagaatata ttgctcaaag agagagaagc aaaaatcaag ataaaattat taagtttcaa 420
tttggaaggt ttgcaagagc tttaatttct aggaactttg atttgtttga ttcagttatt 480
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tcaagtgcct catctaaggc cgatgctgat gagttagagt atttatcagt tgatgattat 600
tacgatttaa agtcttttaa aattttcaaaa tccaacgata cttcttttgc tggttaatgtt 660
aatgccaaaa aaaatgatgt tactaaaaat tttccatttt ggaaagaacg tcaaaacttta 720
atttttacta cagaggatga taataattgg tttttgtcct ccataaattg a 771
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<210> 236

<211> 711

<212> DNA

<213> Homo sapiens

<400> 236

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ttaaagattt atccagattt gaaaaagggg tttgatatca agcttgcagt taaagagctt 180
gatgctagga ttaaagatga caatcccaag gttgttatgc ttgaggatat taagcttgag 240
gagatacctg gaatagtgca cgaaaaaata gaaatcaatg attttacaaa tgctcctaaa 300
atagaatata ttgctcaaag agagagaagc aaaaatcaag ataaaattat taagtttcaa 360
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tttggaaaagt ttgcaagagc ttttaatttct aggaactttg atttggttga ttcagttatt 420
 gcgataaaag ttaacgttat gggtaattt gaatacaaaa atgattttat atcaacttta 480
 tcaagtgtt catctaaggc cgatgctgat gagttagagt atttatcagt tgatgattat 540
 tacgatttaa agtcttttaaa aatttcaaaa tccaacgata cttcttttgc tgtaaatgtt 600
 aatgccaaaa aaaatgatgt tactaaaaat tttccatttt ggaaagaacg tcaaacttta 660
 atttttacta cagaggatga taataattgg tttttgtctt ccataaattg a 711

<210> 237

<211> 668

<212> PRT

<213> Homo sapiens

<400> 237

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Leu His Ala Gln Gly Ile Val Thr Asn Lys Asp Ala Gln Glu Glu Phe
 20 25 30

Lys Trp Ala Leu Asn Ser Tyr Asn Asn Gly Ile Tyr Asp Asp Ala Leu
 35 40 45

Leu Ser Phe Lys Lys Ile Leu Ser Phe Asp Pro Asn Asn Leu Asp Tyr
 50 55 60

His Phe Trp Thr Gly Asn Val Tyr Tyr Arg Leu Gly Tyr Val Glu Glu
 65 70 75 80

Ala Leu Met Glu Trp Arg Asn Leu Lys Asp Gln Gly Tyr Lys Val Pro
 85 90 95

Tyr Leu Arg His Leu Ile Ser Thr Ile Glu Gln Arg Arg Gly Ile Phe
 100 105 110

Ser Asn Tyr Glu Leu Asn Phe Lys Lys Leu Val Lys Val Ala Ser Leu
 115 120 125

Asp Asn Ser Ile Tyr Lys Arg Pro His Gly Tyr Gln Ile Thr Ser Leu
 130 135 140

Arg Ala Asp Lys Tyr Gly Gly Tyr Tyr Ala Ala Asn Phe Val Gly Asn
 145 150 155 160

Glu Ile Leu Tyr Phe Asp Val Asn Asn Asn Val Asn Ala Leu Val Lys
 165 170 175

Asp Gly Phe Ser Tyr Leu Lys Ser Pro Tyr Asp Val Ile Glu Ala Asn
 180 185 190

Asn Leu Leu Tyr Val Thr Leu Tyr Ser Ser Asp Glu Ile Gly Val Tyr
 195 200 205

Asp Lys Val Leu Gly Val Lys Arg Lys Ser Ile Gly Asn Lys Gly Thr
 210 215 220

Lys Asp Gly Glu Leu Leu Ala Pro Gln Tyr Met Ala Ile Asp Lys Arg
 225 230 235 240

Asn Tyr Ile Tyr Val Ser Glu Trp Gly Asn Lys Arg Val Ser Lys Phe
 245 250 255

Gly Leu Glu Gly Asp Phe Ile Leu His Phe Gly Ser Arg Thr Ser Gly
 260 265 270
 Tyr Lys Gly Leu Leu Gly Pro Thr Gly Val Thr Tyr Leu Asn Glu Asn
 275 280 285
 Ile Tyr Val Ala Asp Ser Leu Arg Asn Thr Ile Glu Val Phe Asp Thr
 290 295 300
 Ser Gly Asn His Leu Tyr Ser Val Phe Thr Ser Ile Glu Gly Ile Glu
 305 310 315 320
 Gly Leu Ser Ser Asp Phe Val Gly Asn Asn Val Ile Val Ser Ser Lys
 325 330 335
 Asp Gly Val Tyr Lys Tyr Ser Ile Ala Lys Lys Thr Ile Thr Lys Ile
 340 345 350
 Leu Lys Ala Asp Lys Met Asn Ser Lys Ile Ser Ser Ser Ile Leu Asp
 355 360 365
 Ala Asn Asn Gln Met Ile Val Ser Asp Phe Asn Asn Ala Lys Val Ser
 370 375 380
 Val Tyr Lys Ser Asp Ala Ser Leu Tyr Asp Ser Leu Asn Val Asp Val
 385 390 395 400
 Arg Arg Ile Ile Arg Leu Gly Gly Pro Lys Ile Tyr Val Glu Leu Asn
 405 410 415
 Val Ser Ser Lys Ser Gly Leu Pro Val Val Gly Leu Lys Ser Glu Asn
 420 425 430
 Phe Ser Ile Ser Asn Glu Asn Tyr Tyr Ile Val Asn Pro Lys Val Ala
 435 440 445
 Tyr Asn Val Asn Ala Ser Lys Asp Ile Asn Ile Ala Val Val Phe Asp
 450 455 460
 Lys Ser Ser Tyr Met Lys Lys Tyr Asp Thr Asp Gln Ile Val Gly Leu
 465 470 475 480
 Asn Ala Leu Met Glu Leu Ser Lys Asn Lys Asn Phe Ser Phe Ile Asn
 485 490 495
 Ala Thr Ser Val Pro Ile Ile Asp Asn Ile Glu Ser Leu Thr Asn Ser
 500 505 510
 Ile Arg Asn Thr Ser Ser Leu Gly Pro Tyr Ser Thr Asp Ala Val Lys
 515 520 525
 Thr Asp Val Ser Leu Lys Leu Ala Gly Ser Gly Leu Met Ser Lys Ser
 530 535 540
 Ser Arg Arg Ala Val Val Tyr Phe Ser Gly Gly Ile Leu Asn Arg Lys
 545 550 555 560
 Ala Phe Glu Lys Tyr Ser Leu Asp Thr Ile Val Ser Tyr Tyr Lys Asn
 565 570 575

Asn Asp Ile Arg Phe Tyr Leu Ile Leu Phe Gly Asn Asp Pro Ile Asn
580 585 590

Ser Lys Leu Gln Tyr Leu Val Asn Glu Thr Gly Gly Ala Val Ile Pro
595 600 605

Phe Ser Ser Tyr Glu Gly Val Ser Lys Val Tyr Asp Leu Ile Leu Glu
610 615 620

Gln Lys Thr Gly Thr Tyr Leu Leu Glu Tyr Tyr Tyr Pro Gly Pro Gln
625 630 635 640

Glu Pro Asn Lys Tyr Phe Asn Leu Ser Val Glu Ala Asn Ile Asn Gln
645 650 655

Gln Thr Gly Arg Gly Glu Phe Ala Tyr Phe Ile Asn
660 665

<210> 238

<211> 649

<212> PRT

<213> Homo sapiens

<400> 238

Gln Gly Ile Val Thr Asn Lys Asp Ala Gln Glu Glu Phe Lys Trp Ala
1 5 10 15

Leu Asn Ser Tyr Asn Asn Gly Ile Tyr Asp Asp Ala Leu Leu Ser Phe
20 25 30

Lys Lys Ile Leu Ser Phe Asp Pro Asn Asn Leu Asp Tyr His Phe Trp
35 40 45

Thr Gly Asn Val Tyr Tyr Arg Leu Gly Tyr Val Glu Glu Ala Leu Met
50 55 60

Glu Trp Arg Asn Leu Lys Asp Gln Gly Tyr Lys Val Pro Tyr Leu Arg
65 70 75 80

His Leu Ile Ser Thr Ile Glu Gln Arg Arg Gly Ile Phe Ser Asn Tyr
85 90 95

Glu Leu Asn Phe Lys Lys Leu Val Lys Val Ala Ser Leu Asp Asn Ser
100 105 110

Ile Tyr Lys Arg Pro His Gly Tyr Gln Ile Thr Ser Leu Arg Ala Asp
115 120 125

Lys Tyr Gly Gly Tyr Tyr Ala Ala Asn Phe Val Gly Asn Glu Ile Leu
130 135 140

Tyr Phe Asp Val Asn Asn Asn Val Asn Ala Leu Val Lys Asp Gly Phe
145 150 155 160

Ser Tyr Leu Lys Ser Pro Tyr Asp Val Ile Glu Ala Asn Asn Leu Leu
165 170 175

Tyr Val Thr Leu Tyr Ser Ser Asp Glu Ile Gly Val Tyr Asp Lys Val
180 185 190

Leu Gly Val Lys Arg Lys Ser Ile Gly Asn Lys Gly Thr Lys Asp Gly
 195 200 205
 Glu Leu Leu Ala Pro Gln Tyr Met Ala Ile Asp Lys Arg Asn Tyr Ile
 210 215 220
 Tyr Val Ser Glu Trp Gly Asn Lys Arg Val Ser Lys Phe Gly Leu Glu
 225 230 235 240
 Gly Asp Phe Ile Leu His Phe Gly Ser Arg Thr Ser Gly Tyr Lys Gly
 245 250 255
 Leu Leu Gly Pro Thr Gly Val Thr Tyr Leu Asn Glu Asn Ile Tyr Val
 260 265 270
 Ala Asp Ser Leu Arg Asn Thr Ile Glu Val Phe Asp Thr Ser Gly Asn
 275 280 285
 His Leu Tyr Ser Val Phe Thr Ser Ile Glu Gly Ile Glu Gly Leu Ser
 290 295 300
 Ser Asp Phe Val Gly Asn Asn Val Ile Val Ser Ser Lys Asp Gly Val
 305 310 315 320
 Tyr Lys Tyr Ser Ile Ala Lys Lys Thr Ile Thr Lys Ile Leu Lys Ala
 325 330 335
 Asp Lys Met Asn Ser Lys Ile Ser Ser Ser Ile Leu Asp Ala Asn Asn
 340 345 350
 Gln Met Ile Val Ser Asp Phe Asn Asn Ala Lys Val Ser Val Tyr Lys
 355 360 365
 Ser Asp Ala Ser Leu Tyr Asp Ser Leu Asn Val Asp Val Arg Arg Ile
 370 375 380
 Ile Arg Leu Gly Gly Pro Lys Ile Tyr Val Glu Leu Asn Val Ser Ser
 385 390 395 400
 Lys Ser Gly Leu Pro Val Val Gly Leu Lys Ser Glu Asn Phe Ser Ile
 405 410 415
 Ser Asn Glu Asn Tyr Tyr Ile Val Asn Pro Lys Val Ala Tyr Asn Val
 420 425 430
 Asn Ala Ser Lys Asp Ile Asn Ile Ala Val Val Phe Asp Lys Ser Ser
 435 440 445
 Tyr Met Lys Lys Tyr Asp Thr Asp Gln Ile Val Gly Leu Asn Ala Leu
 450 455 460
 Met Glu Leu Ser Lys Asn Lys Asn Phe Ser Phe Ile Asn Ala Thr Ser
 465 470 475 480
 Val Pro Ile Ile Asp Asn Ile Glu Ser Leu Thr Asn Ser Ile Arg Asn
 485 490 495
 Thr Ser Ser Leu Gly Pro Tyr Ser Thr Asp Ala Val Lys Thr Asp Val
 500 505 510

Ser Leu Lys Leu Ala Gly Ser Gly Leu Met Ser Lys Ser Ser Arg Arg
515 520 525

Ala Val Val Tyr Phe Ser Gly Gly Ile Leu Asn Arg Lys Ala Phe Glu
530 535 540

Lys Tyr Ser Leu Asp Thr Ile Val Ser Tyr Tyr Lys Asn Asn Asp Ile
545 550 555 560

Arg Phe Tyr Leu Ile Leu Phe Gly Asn Asp Pro Ile Asn Ser Lys Leu
565 570 575

Gln Tyr Leu Val Asn Glu Thr Gly Gly Ala Val Ile Pro Phe Ser Ser
580 585 590

Tyr Glu Gly Val Ser Lys Val Tyr Asp Leu Ile Leu Glu Gln Lys Thr
595 600 605

Gly Thr Tyr Leu Leu Glu Tyr Tyr Tyr Pro Gly Pro Gln Glu Pro Asn
610 615 620

Lys Tyr Phe Asn Leu Ser Val Glu Ala Asn Ile Asn Gln Gln Thr Gly
625 630 635 640

Arg Gly Glu Phe Ala Tyr Phe Ile Asn
645

<210> 239

<211> 2007

<212> DNA

<213> Homo sapiens

<400> 239

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ggaatagtta ctaataaaga tgctcaagaa gagtttaaat gggctcttaa ttcttataat 120
aatggaattt acgatgatgc tcttttatct tttaaaaaaa ttttaagctt tgatcctaata 180
aatcttgatt atcatttttg gactggcaat gtttattata gactgggtta tgttgaagaa 240
gctttaatgg aatggagaaa tttaaaagat caaggctata aggttccta tcttagacat 300
ttgatttcta ctattgagca aaggagaggt attttttcaa attatgaact taattttaaa 360
aaacttgtaa aagttgcttc tcttgataat tctatttata aaaggccaca tgggtaccag 420
attacatctt taagggtctga taagtacggc ggatattacg ctgctaactt tgtaggcaat 480
gaaatattgt attttgatgt taataacaat gttaatgctt tagttaaaga tggcttttagt 540
tatttaaaat caccttatga tgttattgaa gctaataatc tgctttatgt gactctttat 600
tcaagtgatg aaattggtgt ttatgacaaa gttcttgagg ttaaaaggaa atctattggg 660
aataaaggca caaaagatgg cgaattgctt gctcctcagt atatggctat tgataagaga 720
aactatattt atgtaagtga gtggggaaat aaaagagtaa gtaaatttgg acttgaagggt 780
gattttattt tgcatttttg ttctagaact tcaggctata agggcctttt aggtcccaca 840
ggcgttactt atttgaatga aaacatttat gttgcagatt ctctgagaaa taccattgaa 900
gtttttgata ctagtggtaa tcatatttat tcagttttta cttctattga gggaatagag 960
gggcttagca gtgattttgt aggttaataat gttatagtat cctcaaaaga tgggtgtttat 1020
aaatatagca ttgctaaaaa gacaattaca aaaattttaa aagcagataa aatgaattct 1080
aaaatttctt catctatttt ggatgccaat aatcagatga ttgtctcaga ttttaataat 1140
gccaaagggtt cagttttacaa gagtgatgca agcctttatg atagtttaaa tgttgatggt 1200
agaagaataa ttaggcttgagg agggcctaaa atttacgttg agcttaatgt tagcagtaaa 1260
agcggattac cagttgttgagg gcttaaaagt gaaaattttt caatttcaaa tgaaaattat 1320
tacattgtca atcccaagggt ggcataataat gtaaattgctt caaaagacat taatatagca 1380
gttggttttg ataaatcttc ttatatgaaa aaatatgata cagatcaaat tgtaggggtta 1440
aatgccctaa tggagttgtc aaaaaataaa aacttttagtt ttataaatgc aacaagtgtg 1500
cccattatag ataattattga aagcttaaca aatagcatta gaaatacaag ttctcttggt 1560

ccttatagta cagatgctgt aaaaacagac gttagtttga agttggcagg ttctgggctt 1620
 atgtcaaaaa gctcaagaag agcagtagtt tatttttagtg gtggtatttt aaatcgtaaa 1680
 gcttttgaaa agtactcttt agatacaata gtaagctatt ataaaaataa tgatataagg 1740
 ttttacttaa tactattttg taatgatcct attaatagta agcttcagta tttagttaat 1800
 gaaacaggcg gtgctgtaat tcctttttca tcttatgaag gtgtatctaa agttttatgat 1860
 ttaatttttag aacaaaaaac gggcacttat ttgttggaat attattatcc aggccctcaa 1920
 gaacctaata aatattttta tttatctgtt gaagcaaata taaatcaaca gacaggaaga 1980
 ggggagtttg catattttat taattag 2007

<210> 240
 <211> 1950
 <212> DNA
 <213> Homo sapiens

<400> 240
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 aataatggaa tttacgatga tgctctttta tcttttaaaa aaattttaag ctttgatcct 120
 aataatcttg attatcattt ttggactggc aatgtttatt atagactggg ttatggtgaa 180
 gaagctttta tggaatggag aaatttaaaa gatcaaggct ataagggtcc ctatcttaga 240
 catttgattt ctactattga gcaaaggaga ggtatttttt caaattatga acttaatttt 300
 aaaaaacttg taaaagttgc ttctcttgat aattctattt ataaaaggcc acatgggtac 360
 cagattacat ctttaagggc tgataagtac ggcgatatt acgctgctaa ctttgtaggc 420
 aatgaaatat tgtattttga tgtaataaac aatgttaatg ctttagttaa agatggcttt 480
 agttatttaa aatcacctta tgatgttatt gaagctaata atctgcttta tgtgactctt 540
 tattcaagtg atgaaattgg tgtttatgac aaagttcttg gagttaaaag gaaatctatt 600
 gggaataaag gcacaaaaga tggcgaattg cttgctcctc agtatatggc tattgataag 660
 agaaactata tttatgtaag tgagtgggga aataaaagag taagtaaatt tggacttgaa 720
 ggtgatttta ttttgcattt tgggtctaga acttcaggct ataagggcct tttaggtccc 780
 acaggcggtta cttatttgaa tgaaaacatt tatgttgtag attctctgag aaataccatt 840
 gaagtttttg atactagtgg taatcattta tattcagttt ttacttctat tgagggaata 900
 gaggggctta gcagtgattt tgtaggtaat aatgttatag tatcctcaa agatgggtgtt 960
 tctaaaatata gcattgctaa aaagacaatt acaaaaattt taaaagcaga taaaatgaat 1020
 tctaaaattt cttcatctat tttggatgcc aataatcaga tgattgtctc agattttaat 1080
 aatgccaaagg tttcagttta caagagtgat gcaagccttt atgatagttt aaatggtgat 1140
 gttagaagaa taattaggct tggagggcct aaaatttacg ttgagcttaa tgttagcagt 1200
 aaaagcggat taccagttgt tgggcttaaa agtgaaaatt tttcaatttc aaatgaaaat 1260
 tattacattg tcaatcccaa ggtggcatat aatgtaaatg cttcaaaaga cattaatata 1320
 gcagttgttt ttgataaatc ttcttatatg aaaaaatatg atacagatca aattgtaggg 1380
 ttaaatgccc taatggagtt gtcaaaaaat aaaaacttta gttttataaa tgcaacaagt 1440
 gtgcccatta tagataatat tgaaagctta acaaatagca ttagaaatac aagttctctt 1500
 ggtccttata gtacagatgc tgtaaaaaca gacgttagtt tgaagttggc aggttctggg 1560
 cttatgtcaa aaagctcaag aagagcagta gttttttta gtggtggtat tttaaatcgt 1620
 aaagcttttg aaaagtactc tttagataca atagtaagct attataaaaa taatgatata 1680
 aggttttact taatactatt tggtaatgat cctattaata gtaagcttca gtatttagtt 1740
 aatgaaacag gcggtgctgt aattcctttt tcatcttatg aaggtgtatc taaagtttat 1800
 gatttaattt tagaacaaaa aacgggcact tatttggttg aatattatta tccaggccct 1860
 caagaaccta ataaatattt taatttatct gttgaagcaa atataaatca acagacagga 1920
 agaggggagt ttgcatattt tattaattag 1950

<210> 241
 <211> 273
 <212> PRT
 <213> Homo sapiens

<400> 241
 Met Ile Lys Ser Ile Leu Asp Tyr Leu Leu Thr Leu His Pro Val Leu
 1 5 10 15
 Leu Gly Leu Leu Gly Ser Thr Phe Thr Trp Phe Thr Thr Ala Phe Gly
 20 25 30

Ala Ala Ala Val Phe Phe Phe Arg Lys Val Asp Asn Lys Ile Met Asp
 35 40 45
 Ala Met Leu Gly Phe Ser Ala Gly Ile Met Ile Ala Ala Ser Phe Phe
 50 55 60
 Ser Leu Ile Gln Pro Ala Ile Glu Arg Ala Glu Glu Leu Gly Tyr Ile
 65 70 75 80
 Thr Trp Val Pro Ala Val Phe Gly Phe Leu Val Gly Ala Phe Phe Ile
 85 90 95
 Tyr Ile Val Asp Val Phe Val Pro Asp Leu Asp Lys Leu Thr Phe Ile
 100 105 110
 Asp Glu Asp Leu Thr Lys His Gly Lys Lys Asp Phe Leu Leu Phe Thr
 115 120 125
 Ala Val Thr Leu His Asn Phe Pro Glu Gly Leu Ala Val Gly Val Ala
 130 135 140
 Phe Gly Ala Leu Ala Ser Asn Pro Asp Ile Gln Thr Leu Val Gly Ala
 145 150 155 160
 Met Leu Leu Thr Leu Gly Ile Gly Ile Gln Asn Ile Pro Glu Gly Ala
 165 170 175
 Ala Ile Ser Leu Pro Leu Arg Arg Gly Asn Val Ala Leu Ala Lys Cys
 180 185 190
 Phe Asn Tyr Gly Gln Met Ser Gly Leu Val Glu Ile Val Gly Gly Leu
 195 200 205
 Met Gly Ala Tyr Ala Val Tyr Ser Phe Thr Arg Ile Leu Pro Phe Ala
 210 215 220
 Leu Ala Phe Ser Ala Gly Ala Met Ile Tyr Val Ser Ile Glu Gln Leu
 225 230 235 240
 Ile Pro Glu Ala Lys Arg Lys Asp Ile Asp Asn Lys Val Pro Ser Ile
 245 250 255
 Phe Gly Val Ile Gly Phe Thr Leu Met Met Phe Leu Asp Val Ser Leu
 260 265 270

Gly

<210> 242
 <211> 239
 <212> PRT
 <213> Homo sapiens

<400> 242
 Ala Val Phe Phe Phe Arg Lys Val Asp Asn Lys Ile Met Asp Ala Met
 1 5 10 15
 Leu Gly Phe Ser Ala Gly Ile Met Ile Ala Ala Ser Phe Phe Ser Leu
 20 25 30

Ile Gln Pro Ala Ile Glu Arg Ala Glu Glu Leu Gly Tyr Ile Thr Trp
 35 40 45
 Val Pro Ala Val Phe Gly Phe Leu Val Gly Ala Phe Phe Ile Tyr Ile
 50 55 60
 Val Asp Val Phe Val Pro Asp Leu Asp Lys Leu Thr Phe Ile Asp Glu
 65 70 75 80
 Asp Leu Thr Lys His Gly Lys Lys Asp Phe Leu Leu Phe Thr Ala Val
 85 90 95
 Thr Leu His Asn Phe Pro Glu Gly Leu Ala Val Gly Val Ala Phe Gly
 100 105 110
 Ala Leu Ala Ser Asn Pro Asp Ile Gln Thr Leu Val Gly Ala Met Leu
 115 120 125
 Leu Thr Leu Gly Ile Gly Ile Gln Asn Ile Pro Glu Gly Ala Ala Ile
 130 135 140
 Ser Leu Pro Leu Arg Arg Gly Asn Val Ala Leu Ala Lys Cys Phe Asn
 145 150 155 160
 Tyr Gly Gln Met Ser Gly Leu Val Glu Ile Val Gly Gly Leu Met Gly
 165 170 175
 Ala Tyr Ala Val Tyr Ser Phe Thr Arg Ile Leu Pro Phe Ala Leu Ala
 180 185 190
 Phe Ser Ala Gly Ala Met Ile Tyr Val Ser Ile Glu Gln Leu Ile Pro
 195 200 205
 Glu Ala Lys Arg Lys Asp Ile Asp Asn Lys Val Pro Ser Ile Phe Gly
 210 215 220
 Val Ile Gly Phe Thr Leu Met Met Phe Leu Asp Val Ser Leu Gly
 225 230 235

<210> 243

<211> 822

<212> DNA

<213> Homo sapiens

<400> 243

atgataaaat caatttttaga ttattttatta actttgcatc ctgtattatt gggacttttta 60
 ggttctactt tcacttggtt tactacagct tttggagcag cagcagtttt tttcttttaga 120
 aaggtagata ataaaaataat ggacgctatg cttgggttttt cagctggcat tatgatagcg 180
 gccagttttt tttcgtttat tcagcctgct atagaaagag ctgaagagct tggatacatt 240
 acttgggtgc cggctgtttt tggatttctt gttggggcat tttttatata tattgtagat 300
 gtatttggtc cagatctgga taaacttact tttattgatg aagacttaac taaacatggg 360
 aaaaaagatt ttttactctt tactgctgtt actttacata attttccaga aggattggct 420
 gttggagttg cttttggagc cttggcgtct aatccagata ttcaaacttt agttgggggct 480
 atgcttctta cgcttggtat tggatttcaa aatattcccg aaggagcagc tatttctctg 540
 cctttaagaa gaggtaatgt tgctttggca aaatgcttta actatggcca aatgtcagga 600
 ttggtagaaa ttgtgggggg gcttatgggt gcttatgcgg tttattcttt tactcgaatt 660
 ttaccttttg ctttggtttt ttctgcagga gctatgatt atgtgtcaat tgaacaatta 720
 atacctgaag ctaagagaaa agacattgac aataaagtgc caagtatatt tgggtgttatt 780
 ggttttacat taatgatgtt tctcgatgtt tcactaggtt aa 822

<210> 244
 <211> 720
 <212> DNA
 <213> Homo sapiens

<400> 244
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 gctggcatta tgatagcggc cagttttttt tcgcttattc agcctgctat agaaagagct 120
 gaagagcttg gatacattac ttgggtgccg gctgtttttg gatttcttgt tggggcattt 180
 tttatatata ttgtagatgt atttgttcca gatctggata aacttacttt tattgatgaa 240
 gacttaacta aacatggtaa aaaagatttt ttactcttta ctgctgttac tttacataat 300
 tttccagaag gattggctgt tggagttgct tttggagcct tggcgtctaa tccagataatt 360
 caaacttttag ttggggctat gcttcttacg cttgggtattg gtattcaaaa tattcccgaa 420
 ggagcagcta tttctctgcc ttttaagaaga ggtaatgttg ctttggcaaa atgctttaac 480
 tatggccaaa tgtcaggatt ggtagaaatt gtgggggggc ttatgggtgc ttatgcggtt 540
 tattctttta ctgaattttt accttttgct ttggcttttt ctgcaggagc tatgatttat 600
 gtgtcaattg aacaattaat acctgaagct aagagaaaag acattgacaa taaagtgcc 660
 agtatatttg gtgttattgg ttttacatta atgatgtttc tcgatgtttc actaggttaa 720

<210> 245
 <211> 753
 <212> PRT
 <213> Homo sapiens

<400> 245
 Met Leu Leu Lys Leu Lys Tyr Arg Phe Val Gly Phe Leu Leu Leu Phe
 1 5 10 15
 Leu Ile Phe Ile Leu Leu Leu Phe Ser Thr Ile Phe Asn Phe Val Leu
 20 25 30
 Cys Gly Tyr Leu Glu Asp Tyr Tyr Lys Gln Leu Thr Arg Ala Gln Val
 35 40 45
 Arg Arg Ala Ala Phe Ser Leu Gln Ser Phe Leu Asp Thr Leu His Val
 50 55 60
 Ile Ile Asn Gly Ala Ala Ser Asn Leu Ala Leu Glu Thr Ile Ser Glu
 65 70 75 80
 Phe Ala Met Ser Glu Asn Arg Gly Lys Asp Phe Ser Glu Ser Glu Leu
 85 90 95
 Ile Asp Leu Arg Lys Asn Pro Lys Phe Val Ile Asp Ser Val Lys Val
 100 105 110
 Ser Lys Lys Tyr Arg Gln Tyr Leu Tyr Asn Phe Met Ala Asn Leu Lys
 115 120 125
 Asn Asp Thr Leu Phe Glu Glu Phe Ala Phe Phe Asp Phe Glu Gly Arg
 130 135 140
 Val Ile Val Ser Thr Arg His Glu Asn Asn Met Asp Phe Gly His Ser
 145 150 155 160
 Glu Ala Asn Thr Asn Tyr Phe Lys Lys Ala Val Glu Asp Tyr Arg Gln
 165 170 175
 Asn Gln Leu Lys Phe Ile Gly Trp Tyr Ser Asn Leu Ser Glu Gly Ile

180	185	190
Ser Ala Glu Val Ala Ile Arg	Ser Lys Gln Ser Glu Lys Lys Ala Phe	
195	200	205
Ala Ile Ile Val Pro Val Tyr Ser Pro Glu Asp Lys Leu Val Cys Gly		
210	215	220
Tyr Leu Ala Gly Tyr Leu Leu Asn Asp Ile Val Ala Asp Ser Phe Asp		
225	230	235
Arg Phe Arg Phe Gly Phe Tyr Lys Arg Gly Asn Phe Ile Tyr Val Asp		
245	250	255
Pro Asn Asn Ile Ala Val Asn Pro Phe Glu Glu Tyr Asn Glu Thr Ser		
260	265	270
Arg Val Ser Ser Lys Phe Leu Asn Val Leu Lys Asp Val Phe Ser Lys		
275	280	285
Pro Pro Phe Pro Ser Asn Ile Ala Ser Glu Val Ser Val Tyr Thr Ile		
290	295	300
Asp Arg Ile Leu Leu Ser Glu Met Gly Glu Asp Cys Tyr Tyr Ala Met		
305	310	315
Leu Pro Ile Ser Ser Lys Leu Gly Glu Lys Ser Gly Val Leu Ile Ala		
325	330	335
Arg Leu Pro Tyr Lys Asp Ile Tyr Gly Val Ile Ser Ser Leu Arg Phe		
340	345	350
Gln Tyr Ile Leu Tyr Ser Val Leu Gly Ile Ile Ala Leu Ser Ile Val		
355	360	365
Leu Ser Ile Arg Ile Asp Arg Ile Ile Ser Phe Arg Leu Asn Ala Ile		
370	375	380
Arg Val Leu Val Gln Asp Met Val Lys Gly Asn Leu Asp Lys Asp Tyr		
385	390	395
Ala Leu Asp Asp Asp Glu Asn Thr Leu Asp Glu Leu Gly Met Leu Ser		
405	410	415
Leu Gln Val Val Lys Met Lys Lys Ala Ile Ser Val Ala Ile Ser Ser		
420	425	430
Val Leu Arg Asn Ile Ser Tyr Val Asn Lys Ala Ser Leu Glu Val Ala		
435	440	445
Ser Ser Ser Gln Asn Leu Ser Ser Ser Ala Leu Gln Gln Ala Ser Ala		
450	455	460
Leu Glu Glu Met Ser Ala Asn Val Glu Gln Ile Ala Ser Gly Val Asn		
465	470	475
Met Ser Ala Asn Asn Ser Tyr Glu Thr Glu Gln Ile Ala Leu Lys Thr		
485	490	495
Asn Glu Asn Ser Gln Ile Gly Gly Arg Ala Val Glu Glu Ser Val Ile		

20	25	30
His Val Ile Ile Asn Gly Ala Ala Ser Asn Leu Ala Leu Glu Thr Ile 35 40 45		
Ser Glu Phe Ala Met Ser Glu Asn Arg Gly Lys Asp Phe Ser Glu Ser 50 55 60		
Glu Leu Ile Asp Leu Arg Lys Asn Pro Lys Phe Val Ile Asp Ser Val 65 70 75 80		
Lys Val Ser Lys Lys Tyr Arg Gln Tyr Leu Tyr Asn Phe Met Ala Asn 85 90 95		
Leu Lys Asn Asp Thr Leu Phe Glu Glu Phe Ala Phe Phe Asp Phe Glu 100 105 110		
Gly Arg Val Ile Val Ser Thr Arg His Glu Asn Asn Met Asp Phe Gly 115 120 125		
His Ser Glu Ala Asn Thr Asn Tyr Phe Lys Lys Ala Val Glu Asp Tyr 130 135 140		
Arg Gln Asn Gln Leu Lys Phe Ile Gly Trp Tyr Ser Asn Leu Ser Glu 145 150 155 160		
Gly Ile Ser Ala Glu Val Ala Ile Arg Ser Lys Gln Ser Glu Lys Lys 165 170 175		
Ala Phe Ala Ile Ile Val Pro Val Tyr Ser Pro Glu Asp Lys Leu Val 180 185 190		
Cys Gly Tyr Leu Ala Gly Tyr Leu Leu Asn Asp Ile Val Ala Asp Ser 195 200 205		
Phe Asp Arg Phe Arg Phe Gly Phe Tyr Lys Arg Gly Asn Phe Ile Tyr 210 215 220		
Val Asp Pro Asn Asn Ile Ala Val Asn Pro Phe Glu Glu Tyr Asn Glu 225 230 235 240		
Thr Ser Arg Val Ser Ser Lys Phe Leu Asn Val Leu Lys Asp Val Phe 245 250 255		
Ser Lys Pro Pro Phe Pro Ser Asn Ile Ala Ser Glu Val Ser Val Tyr 260 265 270		
Thr Ile Asp Arg Ile Leu Leu Ser Glu Met Gly Glu Asp Cys Tyr Tyr 275 280 285		
Ala Met Leu Pro Ile Ser Ser Lys Leu Gly Glu Lys Ser Gly Val Leu 290 295 300		
Ile Ala Arg Leu Pro Tyr Lys Asp Ile Tyr Gly Val Ile Ser Ser Leu 305 310 315 320		
Arg Phe Gln Tyr Ile Leu Tyr Ser Val Leu Gly Ile Ile Ala Leu Ser 325 330 335		
Ile Val Leu Ser Ile Arg Ile Asp Arg Ile Ile Ser Phe Arg Leu Asn		

	340								345						350														
Ala Ile Arg Val Leu Val Gln Asp Met Val Lys Gly Asn Leu Asp Lys 355 360 365																													
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Lys Glu Leu Arg Lys Ser Val Leu Phe Phe Lys Ile Lys Asp Ser Lys 625 630 635 640																													
Ile Glu Asn Pro Glu Asn Asp Asp Tyr Asp Phe Arg Leu Ile Asp Cys 645 650 655																													
Pro Glu Asn Ser Phe Lys Asp Glu Asn Gln Asn Leu Lys Ser Asn Gly																													

660

665

670

Ile Ser Thr Ser Asn Ala Ser Gly His Asn Asn Tyr Ser Leu Asp Ile
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Glu Ser Glu Ser Ser Val Arg Thr Ile Asn Lys Arg Val Asp Pro Lys
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Lys Ala Ile Asp Ile Ala Asp Lys Asp Leu Asn Phe Asp Asp Asp Phe
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Ser Glu Phe

<210> 247

<211> 2262

<212> DNA

<213> Homo sapiens

<400> 247

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<211> 2172
 <212> DNA
 <213> Homo sapiens

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 <211> 383
 <212> PRT
 <213> Homo sapiens

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 Ile Val Gly Leu Val Val Met Gly Leu Gly His Ser Pro Phe Arg Met
 35 40 45
 Tyr Phe Ile Ile Leu Glu Ile Ile Phe Ser Ser Pro Lys His Leu Gly
 50 55 60

Tyr Val Leu Ser Tyr Ser Ala Pro Leu Ile Phe Thr Gly Leu Ser Ile
 65 70 75 80
 Gly Ile Ser Leu Lys Ala Gly Leu Phe Asn Ile Gly Val Glu Gly Gln
 85 90 95
 Phe Ile Leu Gly Ser Ile Val Ala Leu Ile Ala Ser Val Leu Leu Asp
 100 105 110
 Leu Pro Pro Ile Leu His Val Ile Thr Ile Phe Ile Ile Thr Phe Leu
 115 120 125
 Ala Ser Gly Ser Leu Gly Ile Leu Ile Gly Tyr Leu Lys Ala Lys Phe
 130 135 140
 Asn Ile Ser Glu Val Ile Ser Gly Ile Met Phe Asn Trp Ile Leu Phe
 145 150 155 160
 His Leu Asn Asn Ile Ile Leu Asp Phe Ser Phe Ile Lys Arg Asp Asn
 165 170 175
 Ser Asp Phe Ser Lys Pro Ile Lys Glu Ser Ala Tyr Ile Asp Phe Leu
 180 185 190
 Ala Ser Trp Lys Leu Ser Pro Glu Gly Leu Ala Tyr Arg Ser Ser His
 195 200 205
 Pro Phe Val Asn Glu Leu Leu Lys Ala Pro Leu His Phe Gly Ile Ile
 210 215 220
 Leu Gly Ile Ile Phe Ala Ile Leu Ile Trp Phe Leu Leu Asn Lys Thr
 225 230 235 240
 Ile Ile Gly Phe Lys Ile Asn Ala Thr Gly Ser Asn Ile Glu Ala Ser
 245 250 255
 Arg Cys Met Gly Ile Asn Val Lys Ala Val Leu Ile Phe Ser Met Phe
 260 265 270
 Leu Ser Ala Ala Val Ala Gly Leu Ala Gly Ala Ile Gln Leu Met Gly
 275 280 285
 Val Asn Lys Ala Ile Phe Lys Leu Ser Tyr Met Gln Gly Ile Gly Phe
 290 295 300
 Asn Gly Ile Ala Ala Ser Leu Met Gly Asn Asn Ser Pro Ile Gly Ile
 305 310 315 320
 Ile Phe Ser Ser Ile Leu Phe Ser Ile Leu Leu Tyr Gly Ser Ser Arg
 325 330 335
 Val Gln Ser Leu Met Gly Leu Pro Ser Ser Ile Val Ser Leu Met Met
 340 345 350
 Gly Ile Ile Val Leu Val Ile Ser Ala Ser Tyr Phe Leu Asn Lys Ile
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<210> 250
 <211> 348
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Leu Lys Ala Gly Leu Phe Asn Ile Gly Val Glu Gly Gln Phe Ile Leu
 50 55 60
 Gly Ser Ile Val Ala Leu Ile Ala Ser Val Leu Leu Asp Leu Pro Pro
 65 70 75 80
 Ile Leu His Val Ile Thr Ile Phe Ile Ile Thr Phe Leu Ala Ser Gly
 85 90 95
 Ser Leu Gly Ile Leu Ile Gly Tyr Leu Lys Ala Lys Phe Asn Ile Ser
 100 105 110
 Glu Val Ile Ser Gly Ile Met Phe Asn Trp Ile Leu Phe His Leu Asn
 115 120 125
 Asn Ile Ile Leu Asp Phe Ser Phe Ile Lys Arg Asp Asn Ser Asp Phe
 130 135 140
 Ser Lys Pro Ile Lys Glu Ser Ala Tyr Ile Asp Phe Leu Ala Ser Trp
 145 150 155 160
 Lys Leu Ser Pro Glu Gly Leu Ala Tyr Arg Ser Ser His Pro Phe Val
 165 170 175
 Asn Glu Leu Leu Lys Ala Pro Leu His Phe Gly Ile Ile Leu Gly Ile
 180 185 190
 Ile Phe Ala Ile Leu Ile Trp Phe Leu Leu Asn Lys Thr Ile Ile Gly
 195 200 205
 Phe Lys Ile Asn Ala Thr Gly Ser Asn Ile Glu Ala Ser Arg Cys Met
 210 215 220
 Gly Ile Asn Val Lys Ala Val Leu Ile Phe Ser Met Phe Leu Ser Ala
 225 230 235 240
 Ala Val Ala Gly Leu Ala Gly Ala Ile Gln Leu Met Gly Val Asn Lys
 245 250 255
 Ala Ile Phe Lys Leu Ser Tyr Met Gln Gly Ile Gly Phe Asn Gly Ile
 260 265 270
 Ala Ala Ser Leu Met Gly Asn Asn Ser Pro Ile Gly Ile Ile Phe Ser
 275 280 285

Ser Ile Leu Phe Ser Ile Leu Leu Tyr Gly Ser Ser Arg Val Gln Ser
 290 295 300

Leu Met Gly Leu Pro Ser Ser Ile Val Ser Leu Met Met Gly Ile Ile
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Val Leu Val Ile Ser Ala Ser Tyr Phe Leu Asn Lys Ile Val Leu Lys
 325 330 335

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<210> 251
 <211> 1152
 <212> DNA
 <213> Homo sapiens

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 atgggccttc catcttcaat tgtatctttg atgatgggaa taattgttct tgtaatttct 1080
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<210> 252
 <211> 1050
 <212> DNA
 <213> Homo sapiens

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<210> 253
 <211> 348
 <212> PRT
 <213> Homo sapiens

<400> 253
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 Tyr Lys Ile Arg Phe Ala Leu Ile Phe Leu Gly Phe Leu Phe Asp Thr
 35 40 45
 Ile Phe Ile Phe Ile Phe Leu Tyr Lys Ile Thr Lys Ala Tyr Leu Ser
 50 55 60
 Gln Arg Leu Glu Ile Tyr Val Arg Asn Asn Leu Phe Phe Asp Ile Ile
 65 70 75 80
 His Cys Leu Ile Pro Leu Ala Phe Tyr Ser Ser Tyr Gln Leu Lys Asn
 85 90 95
 Ile Ile Val Ala His Glu Thr Ile Leu Asn Pro Ile Met Leu Ser Leu
 100 105 110
 Phe Lys Leu Arg Phe Leu Arg Leu Leu Arg Phe Asn Asp Leu Ile Ile
 115 120 125
 Glu Ile Tyr Tyr Asn Ser Lys Glu Lys Asn Leu Ile Leu Ile Ala Phe
 130 135 140
 Ala Arg Thr Phe Ser Met Ser Leu Leu Ile Pro Phe Thr Phe Phe Ile
 145 150 155 160
 Ile Ile Ser Ser Ser Lys Ile Val Asn Ser Ile Pro Glu Lys Gln Glu
 165 170 175
 Phe Asn Ile Ile Lys Asn Ile Ser Ile Ile Asn Glu Lys Ala Tyr Ile
 180 185 190
 Lys Glu Lys Tyr Pro Phe Ile Leu Ile Ile Lys Glu Lys Asp Asp Ile
 195 200 205
 Ile Tyr Ser Lys Ser Asp Glu Ile Phe Val Tyr Tyr Ser Pro Ser Glu
 210 215 220
 Tyr Arg Val Ile Glu Met Glu Lys Thr Lys Phe Tyr Ile Asp Lys Tyr
 225 230 235 240
 Leu Gln Arg Lys Ser Asp Ser Ile Leu Gly Ile Phe Leu Phe Thr Leu
 245 250 255
 Phe Ala Ser Phe Thr Ile Phe Leu Met Asn Phe Tyr Lys Phe Phe Lys

260 265 270
 Ala Ser Phe Leu Asn Pro Ile Ile Leu Met Thr Lys Ile Leu Gln Asp
 275 280 285
 Pro Leu Glu Tyr Arg Lys Ile Gln Ile Pro Phe Thr Leu Ser Glu Glu
 290 295 300
 Lys Val Tyr Glu Leu Ala Lys Ser Phe Asn Asn Leu Leu Leu Lys Glu
 305 310 315 320
 Lys Leu Asn Ser Lys Arg Lys Ser Lys Ile Pro Leu Glu Ile Glu Lys
 325 330 335
 Val Lys Lys Ile Ile Asn Lys Asn Gln Glu Ile Lys
 340 345

 <210> 254
 <211> 337
 <212> PRT
 <213> Homo sapiens

 <400> 254
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 Phe Leu Phe Asp Thr Ile Phe Ile Phe Ile Phe Leu Tyr Lys Ile Thr
 35 40 45
 Lys Ala Tyr Leu Ser Gln Arg Leu Glu Ile Tyr Val Arg Asn Asn Leu
 50 55 60
 Phe Phe Asp Ile Ile His Cys Leu Ile Pro Leu Ala Phe Tyr Ser Ser
 65 70 75 80
 Tyr Gln Leu Lys Asn Ile Ile Val Ala His Glu Thr Ile Leu Asn Pro
 85 90 95
 Ile Met Leu Ser Leu Phe Lys Leu Arg Phe Leu Arg Leu Leu Arg Phe
 100 105 110
 Asn Asp Leu Ile Ile Glu Ile Tyr Tyr Asn Ser Lys Glu Lys Asn Leu
 115 120 125
 Ile Leu Ile Ala Phe Ala Arg Thr Phe Ser Met Ser Leu Leu Ile Pro
 130 135 140
 Phe Thr Phe Phe Ile Ile Ile Ser Ser Ser Lys Ile Val Asn Ser Ile
 145 150 155 160
 Pro Glu Lys Gln Glu Phe Asn Ile Ile Lys Asn Ile Ser Ile Ile Asn
 165 170 175
 Glu Lys Ala Tyr Ile Lys Glu Lys Tyr Pro Phe Ile Leu Ile Ile Lys
 180 185 190
 Glu Lys Asp Asp Ile Ile Tyr Ser Lys Ser Asp Glu Ile Phe Val Tyr

195 200 205

Tyr Ser Pro Ser Glu Tyr Arg Val Ile Glu Met Glu Lys Thr Lys Phe
210 215 220

Tyr Ile Asp Lys Tyr Leu Gln Arg Lys Ser Asp Ser Ile Leu Gly Ile
225 230 235 240

Phe Leu Phe Thr Leu Phe Ala Ser Phe Thr Ile Phe Leu Met Asn Phe
245 250 255

Tyr Lys Phe Phe Lys Ala Ser Phe Leu Asn Pro Ile Ile Leu Met Thr
260 265 270

Lys Ile Leu Gln Asp Pro Leu Glu Tyr Arg Lys Ile Gln Ile Pro Phe
275 280 285

Thr Leu Ser Glu Glu Lys Val Tyr Glu Leu Ala Lys Ser Phe Asn Asn
290 295 300

Leu Leu Leu Lys Glu Lys Leu Asn Ser Lys Arg Lys Ser Lys Ile Pro
305 310 315 320

Leu Glu Ile Glu Lys Val Lys Lys Ile Ile Asn Lys Asn Gln Glu Ile
325 330 335

Lys

<210> 255
<211> 1047
<212> DNA
<213> Homo sapiens

<400> 255

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cactgcctta	ttccttttagc	gttttatagc	tcatatcagc	ttaaaaacat	aattgtcgcc	300
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ataatatcaa	gctcaaaaat	tgtaaattca	ataccagaaa	aacaagaatt	taatatcatt	540
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ataatcaagg	aaaaagatga	cataatatac	tcaaaatcag	acgaaatatt	tgtttactac	660
agtcccagtg	aatatagagt	aatagaaatg	gagaaaacaa	aatttttatat	agataaatat	720
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actatttttt	taatgaattt	ttataaattt	tttaaagcaa	gcttttttaa	tcctattatt	840
ttaatgacaa	aaatttttaca	agaccattta	gaatatcgaa	aaattcaaat	tccttttact	900
ttaagcggaag	aaaaagtata	tgaacttgca	aaatcattta	acaatctctt	gctaaaagaa	960
aaactaaact	caaagcgaaa	aagcaaaaata	ccttttagaaa	ttgaaaaagt	aaaaaaaaata	1020
attaataaaa	accaggaaat	aaaatga				1047

<210> 256
<211> 1014
<212> DNA
<213> Homo sapiens

<400> 256

ataataattt tttcaatatt tgaactttta atcgaagaac tctcaataat tcttttttta 60
 ccatacaaaa tacgatttgc actaatattt cttgggtttc tatttgacac aattttttatt 120
 ttcatttttt tatacaaaaat aaccaaggcc tacctttccc aaagattaga aatctacgtc 180
 agaaacaatc tattcttcga tataatccac tgccttattc ctttagcggt ttatagctca 240
 tatcagctta aaaacataat tgtcgcccat gaaacaatat taaatccaat aatgctatca 300
 cttttcaagt taagattttt aagactttct aggttttaag acctaataat agaaatatat 360
 tacaattcaa aagaaaagaa cctaatacta atagcatttg ctaggacatt ttcaatgagc 420
 ttattaatac catttacatt ttttataata atatcaagct caaaaattgt aaattcaata 480
 ccagaaaaac aagaatttaa tatcattaaa aatatatcaa taataaatga aaaagcttac 540
 attaaagaaa aatatccctt catcttaata atcaaggaaa aagatgacat aatatactca 600
 aaatcagacg aaatatttgt ttactacagt cccagtgaat atagagtaat agaaatggag 660
 aaaacaaaaa tttatataga taaatatttg caaagaaaaa gcgattctat tcttggaatt 720
 tttctattta cattgtttgc atcattttact atttttttta tgaattttta taaatttttt 780
 aaagcaagct ttttaaatcc tattattttta atgacaaaaa ttttacaaga cccattagaa 840
 tatcgaaaaa ttcaaatcc ttttacttta agcgaagaaa aagtatatga acttgcaaaa 900
 tcattttaaca atctcttgct aaaagaaaaa ctaaactcaa agcgaaaaag caaataacct 960
 ttagaatttg aaaaagtaaa aaaaataatt aataaaaacc aggaataaaa atga 1014

<210> 257

<211> 322

<212> PRT

<213> Homo sapiens

<400> 257

Met Lys Ile Gln Ile Ile Ile Met Leu Leu Ala Leu Leu Asp Phe Pro
 1 5 10 15

Leu Asn Ala Arg Leu Leu Asp Ile Ser Ile Glu Lys Arg Ala Asp Glu
 20 25 30

Glu Ile Lys Lys Tyr Ser Ser Tyr Asn Leu Ile Leu Glu Lys Glu Tyr
 35 40 45

Tyr Thr Asn Phe Pro Thr Ser Glu Ile Glu Lys Asn Ile Tyr Lys Leu
 50 55 60

Thr Glu His Phe Val Lys Ser Ile Met Leu Asn Lys Thr Asn Tyr Ser
 65 70 75 80

Leu Leu Asn Ser Asn Tyr Lys Glu Ala Asn Lys Tyr Leu Ile Gln Ser
 85 90 95

Glu Leu Ile Asp Lys Lys Phe Leu Lys Tyr Lys Ile Phe Lys Ile Lys
 100 105 110

Asn Ile Asn Gly Ile Phe Lys Ser His Ser Leu Ile Tyr Thr Lys Lys
 115 120 125

Gly Phe Tyr Lys Leu Glu Leu Tyr Ile Glu Asn Asn Ala Glu Pro Leu
 130 135 140

Lys Ile Phe Asn Leu Asn Ile Thr Tyr Phe Leu Lys Asn Leu Asp Lys
 145 150 155 160

Ile Ser Asn Glu Met Ile Phe Phe Pro Arg Glu Lys Arg Glu Val Asn
 165 170 175

Met Ile Gln Lys Thr Thr Ile Ala Ala Asp Ser Ser Ser Lys Pro Arg
 180 185 190

Gly Ile Asn Tyr Asp Thr Gly Ile Pro Phe Asn Val Leu Ile Val Asp
 195 200 205
 Asp Ser Val Phe Thr Val Lys Gln Leu Thr Gln Ile Phe Thr Ser Glu
 210 215 220
 Gly Phe Asn Ile Ile Asp Thr Ala Ala Asp Gly Glu Glu Ala Val Ile
 225 230 235 240
 Lys Tyr Lys Asn His Tyr Pro Asn Ile Asp Ile Val Thr Leu Asp Ile
 245 250 255
 Thr Met Pro Lys Met Asp Gly Ile Thr Cys Leu Ser Asn Ile Met Glu
 260 265 270
 Phe Asp Lys Asn Ala Arg Val Ile Met Ile Ser Ala Leu Gly Lys Glu
 275 280 285
 Gln Leu Val Lys Asp Cys Leu Ile Lys Gly Ala Lys Thr Phe Ile Val
 290 295 300
 Lys Pro Leu Asp Arg Ala Lys Val Leu Gln Arg Val Met Ser Val Phe
 305 310 315 320
 Val Lys

 <210> 258
 <211> 303
 <212> PRT
 <213> Homo sapiens

 <400> 258
 Arg Leu Leu Asp Ile Ser Ile Glu Lys Arg Ala Asp Glu Glu Ile Lys
 1 5 10 15
 Lys Tyr Ser Ser Tyr Asn Leu Ile Leu Glu Lys Glu Tyr Tyr Thr Asn
 20 25 30
 Phe Pro Thr Ser Glu Ile Glu Lys Asn Ile Tyr Lys Leu Thr Glu His
 35 40 45
 Phe Val Lys Ser Ile Met Leu Asn Lys Thr Asn Tyr Ser Leu Leu Asn
 50 55 60
 Ser Asn Tyr Lys Glu Ala Asn Lys Tyr Leu Ile Gln Ser Glu Leu Ile
 65 70 75 80
 Asp Lys Lys Phe Leu Lys Tyr Lys Ile Phe Lys Ile Lys Asn Ile Asn
 85 90 95
 Gly Ile Phe Lys Ser His Ser Leu Ile Tyr Thr Lys Lys Gly Phe Tyr
 100 105 110
 Lys Leu Glu Leu Tyr Ile Glu Asn Asn Ala Glu Pro Leu Lys Ile Phe
 115 120 125
 Asn Leu Asn Ile Thr Tyr Phe Leu Lys Asn Leu Asp Lys Ile Ser Asn
 130 135 140

Glu Met Ile Phe Phe Pro Arg Glu Lys Arg Glu Val Asn Met Ile Gln
 145 150 155 160
 Lys Thr Thr Ile Ala Ala Asp Ser Ser Ser Lys Pro Arg Gly Ile Asn
 165 170 175
 Tyr Asp Thr Gly Ile Pro Phe Asn Val Leu Ile Val Asp Asp Ser Val
 180 185 190
 Phe Thr Val Lys Gln Leu Thr Gln Ile Phe Thr Ser Glu Gly Phe Asn
 195 200 205
 Ile Ile Asp Thr Ala Ala Asp Gly Glu Glu Ala Val Ile Lys Tyr Lys
 210 215 220
 Asn His Tyr Pro Asn Ile Asp Ile Val Thr Leu Asp Ile Thr Met Pro
 225 230 235 240
 Lys Met Asp Gly Ile Thr Cys Leu Ser Asn Ile Met Glu Phe Asp Lys
 245 250 255
 Asn Ala Arg Val Ile Met Ile Ser Ala Leu Gly Lys Glu Gln Leu Val
 260 265 270
 Lys Asp Cys Leu Ile Lys Gly Ala Lys Thr Phe Ile Val Lys Pro Leu
 275 280 285
 Asp Arg Ala Lys Val Leu Gln Arg Val Met Ser Val Phe Val Lys
 290 295 300

<210> 259
 <211> 516
 <212> DNA
 <213> Homo sapiens

<400> 259
 atgaaaattc aaataattat aatgctgctt gcattgttag attttccact taatgccaga 60
 cttttggaca tttcaattga aaaaagagca gatgaagaaa taaaaaata ttcgtcttat 120
 aatttaattt tagaaaaaga atactatacc aattttccaa caagcgaaat agaaaaaat 180
 atttataaac taacagaaca ttttgtaaaa agcataatgc tcaataaaac taactacagc 240
 ttattaaatt caaactacaa agaagcaaat aaatatctaa ttcaaagcga actcattgat 300
 aaaaaatttt taaaatataa aatattttaa atcaaaaata taaatggaat ttttaaaagc 360
 cattcactaa tatatacaaa aaaaggattt tacaaattag aactttacat agaaaataat 420
 gcagaacctc taaaaatatt taaccttaac attacttatt ttttaaagaa tttagataaa 480
 ataagtaatg aaatgatttt tttcccaagg gaatga 516

<210> 260
 <211> 459
 <212> DNA
 <213> Homo sapiens

<400> 260
 agacttttgg acattttcaat tgaaaaaaga gcagatgaag aaataaaaaa atattcgtct 60
 tataatttaa ttttagaaaa agaatactat accaattttc caacaagcga aatagaaaaa 120
 aatatttata aactaacaga acatttttga aaaagcataa tgctcaataa aactaactac 180
 agcttattaa attcaaacta caaagaagca aataaatatc taattcaaag cgaactcatt 240
 gataaaaaat ttttaaaata taaaatattt aaaatcaaaa atataaatgg aattttttaa 300
 agccattcac taatatatac aaaaaaaggga ttttacaat tagaacttta catagaaaat 360
 aatgcagaac ctctaataat atttaacctt aacattactt atttttttaa gaatttagat 420
 aaaataagta atgaaatgat ttttttccca agggaatga 459

<210> 261
 <211> 274
 <212> PRT
 <213> Homo sapiens

<400> 261
 Met Leu Lys Thr Leu Thr Lys Ile Ile Thr Ile Ser Cys Leu Ile Val
 1 5 10 15
 Gly Cys Ala Ser Leu Pro Tyr Thr Pro Pro Lys Gln Asn Leu Asn Tyr
 20 25 30
 Leu Met Glu Leu Leu Pro Gly Ala Asn Leu Tyr Ala His Val Asn Leu
 35 40 45
 Ile Lys Asn Arg Ser Ile Tyr Asn Ser Leu Ser Pro Lys Tyr Lys Ser
 50 55 60
 Val Leu Gly Leu Ile Ser Asn Leu Tyr Phe Ser Tyr Lys Lys Glu Asn
 65 70 75 80
 Asn Asp Phe Ala Leu Leu Ile Met Gly Asn Phe Pro Lys Asp Ile Phe
 85 90 95
 Trp Gly Ile His Lys Asn Arg Asn Thr Glu Ser Ile Gly Asn Ile Phe
 100 105 110
 Thr Asn Pro Lys Trp Lys Leu Lys Asn Ser Asn Ile Tyr Ile Ile Pro
 115 120 125
 Asn Lys Ala Arg Thr Ser Ile Ala Ile Thr Gln Lys Asp Ile Thr Ala
 130 135 140
 Lys Asp Asn Asn Met Leu Thr Thr Lys Tyr Ile Gly Glu Ile Glu Lys
 145 150 155 160
 Asn Glu Met Phe Phe Trp Ile Gln Asp Pro Thr Leu Leu Leu Pro Asn
 165 170 175
 Gln Ile Val Ser Lys Asn Leu Ile Pro Phe Ser Ser Gly Thr Leu
 180 185 190
 Ser Ile Asn Ser Leu Asn Gln Glu Glu Tyr Ile Phe Lys Ser Leu Ile
 195 200 205
 Lys Thr Asn Asn Pro Pro Ile Leu Lys Ile Leu Ser Lys Lys Leu Ile
 210 215 220
 Pro Thr Val Leu Thr Asn Met Thr Asn Leu Thr Ile Ser Ser His Ile
 225 230 235 240
 Lys Thr Thr Ile Lys Asp Gln Asn Thr Val Glu Ile Glu Phe Asn Ile
 245 250 255
 Gln Lys Ser Ser Val Glu Ser Leu Ile Glu Lys Leu Ala Ser Asn Ile
 260 265 270
 Gln Thr

<210> 262
 <211> 253
 <212> PRT
 <213> Homo sapiens

<400> 262
 Pro Tyr Thr Pro Pro Lys Gln Asn Leu Asn Tyr Leu Met Glu Leu Leu
 1 5 10 15
 Pro Gly Ala Asn Leu Tyr Ala His Val Asn Leu Ile Lys Asn Arg Ser
 20 25 30
 Ile Tyr Asn Ser Leu Ser Pro Lys Tyr Lys Ser Val Leu Gly Leu Ile
 35 40 45
 Ser Asn Leu Tyr Phe Ser Tyr Lys Lys Glu Asn Asn Asp Phe Ala Leu
 50 55 60
 Leu Ile Met Gly Asn Phe Pro Lys Asp Ile Phe Trp Gly Ile His Lys
 65 70 75 80
 Asn Arg Asn Thr Glu Ser Ile Gly Asn Ile Phe Thr Asn Pro Lys Trp
 85 90 95
 Lys Leu Lys Asn Ser Asn Ile Tyr Ile Ile Pro Asn Lys Ala Arg Thr
 100 105 110
 Ser Ile Ala Ile Thr Gln Lys Asp Ile Thr Ala Lys Asp Asn Asn Met
 115 120 125
 Leu Thr Thr Lys Tyr Ile Gly Glu Ile Glu Lys Asn Glu Met Phe Phe
 130 135 140
 Trp Ile Gln Asp Pro Thr Leu Leu Leu Pro Asn Gln Ile Val Ser Ser
 145 150 155 160
 Lys Asn Leu Ile Pro Phe Ser Ser Gly Thr Leu Ser Ile Asn Ser Leu
 165 170 175
 Asn Gln Glu Glu Tyr Ile Phe Lys Ser Leu Ile Lys Thr Asn Asn Pro
 180 185 190
 Pro Ile Leu Lys Ile Leu Ser Lys Lys Leu Ile Pro Thr Val Leu Thr
 195 200 205
 Asn Met Thr Asn Leu Thr Ile Ser Ser His Ile Lys Thr Thr Ile Lys
 210 215 220
 Asp Gln Asn Thr Val Glu Ile Glu Phe Asn Ile Gln Lys Ser Ser Val
 225 230 235 240
 Glu Ser Leu Ile Glu Lys Leu Ala Ser Asn Ile Gln Thr
 245 250

<210> 263
 <211> 825
 <212> DNA
 <213> Homo sapiens

<400> 263
atgttaaaaa cattaacaaa aataattacc atttcatgcc tcatagtggg atgcgcaagc 60
ctgccttaca ctccctccaaa acaaaatcta aattacttaa tggaactttt acctggcgca 120
aattttatagc cccatgtaaa tttaattaaa aacaggtcta ttataactc tttaagccct 180
aaatataaat cagttcttgg gcttataagc aattttatact ttagctataa aaaagaaaat 240
aacgattttg ctctactaat aatgggtaat ttcccaaaaag atatttttctg ggggaattcat 300
aaaaatagaa atacagaatc aataggcaat atattttacaa atccaaaatg gaaacttaaa 360
aattcaaata tatacattat tccaaaacaaa gctagaacta gcattgcaat aacccaaaaa 420
gatataaccg caaaagacaa taatatgcta acaacaaaat atattgggga aatagaaaaa 480
aatgaaatgt ttttttggat tcaagatcca acattattgc tcccaaacca aatagtaagc 540
agcaaaaatt taattccctt tagcagtgga actttgtcta taaacagctt aaatcaagaa 600
gaatatattt ttaaactcctt aatcaaaaaca aataatccac caatactaaa aatattgtca 660
aaaaagttaa ttccaaccgt cttgacaaac atgacaaacc tcacaatatc aagccacata 720
aagaccacaa taaaagacca aaatacggtt gaaatagaat ttaattattca aaaatctagt 780
gttgaaagcc ttatagaaaa actagcttca aatattcaaa cctaa 825

<210> 264
<211> 762
<212> DNA
<213> Homo sapiens

<400> 264
ccttacactc ctccaaaaca aaatctaaat tacttaatgg aactttttacc tggcgcaaat 60
ttatacgccc atgtaaattt aattaaaaac aggtctattt ataactcttt aagccctaaa 120
tataaatcag ttcttgggct tataagcaat ttatacttta gctataaaaa agaaaaatac 180
gattttgctc tactaataat gggtaatttc ccaaaagata ttttctgggg aattcataaa 240
aatagaaata cagaatcaat aggcaatata ttacaaaatc caaaatggaa acttaaaaaat 300
tcaaataat acattattcc aaacaaagct agaactagca ttgcaataac caaaaaagat 360
ataaccgcaa aagacaataa tatgctaaca acaaaatata ttgggggaaat agaaaaaaat 420
gaaatgtttt tttggattca agatccaaca ttattgctcc caaaccaa atagtaagcagc 480
aaaaatttaa ttcccttttag cagtgggaact ttgtctataa acagcttaaa tcaagaagaa 540
tatattttta aatccttaat caaaacaaat aatccaccaa tactaaaaat attgtcaaaa 600
aagttaattc caaccgtctt gacaaacatg acaaacctca caatatcaag ccacataaag 660
accacaataa aagacaaaaa tacggttgaa atagaattta atattcaaaa atctagtgtt 720
gaaagcctta tagaaaaact agcttcaaat attcaaacct aa 762

<210> 265
<211> 136
<212> PRT
<213> Homo sapiens

<400> 265
Met Gly Ile Thr Val Phe Tyr Leu Phe Ser Ile Phe Ala Ser Phe Val
1 5 10 15
Leu Gly Ser Ser Met Asp Ser Val Lys Glu Asn Val Leu Lys Ser Thr
20 25 30
Ile Phe Tyr Tyr Asp Val Glu Glu Val Glu Phe Pro Tyr Ala Arg Lys
35 40 45
Gln Thr Leu Gln Phe Ile Ala Lys Thr His Leu Lys Tyr Ala Val Phe
50 55 60
Asn Phe Asp Lys Asn Lys Met Phe Ser Tyr Thr Phe Val Phe Asp Lys
65 70 75 80
Lys Leu Ile Ser Gln Tyr Ala Ile Phe Ile Glu Val Lys Lys Lys Phe
85 90 95

Gly Glu Ala Thr Leu Val Thr Pro Leu Asn Tyr Leu Trp Asp Leu Gly
 100 105 110

Asp Ser Ile Ile Val Leu Asn Lys Asn Ile Leu Arg Ile Thr Leu Lys
 115 120 125

Ser Tyr Ile Ser Asn Tyr Asn Lys
 130 135

<210> 266
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 266
 Ser Met Asp Ser Val Lys Glu Asn Val Leu Lys Ser Thr Ile Phe Tyr
 1 5 10 15

Tyr Asp Val Glu Glu Val Glu Phe Pro Tyr Ala Arg Lys Gln Thr Leu
 20 25 30

Gln Phe Ile Ala Lys Thr His Leu Lys Tyr Ala Val Phe Asn Phe Asp
 35 40 45

Lys Asn Lys Met Phe Ser Tyr Thr Phe Val Phe Asp Lys Lys Leu Ile
 50 55 60

Ser Gln Tyr Ala Ile Phe Ile Glu Val Lys Lys Lys Phe Gly Glu Ala
 65 70 75 80

Thr Leu Val Thr Pro Leu Asn Tyr Leu Trp Asp Leu Gly Asp Ser Ile
 85 90 95

Ile Val Leu Asn Lys Asn Ile Leu Arg Ile Thr Leu Lys Ser Tyr Ile
 100 105 110

Ser Asn Tyr Asn Lys
 115

<210> 267
 <211> 411
 <212> DNA
 <213> Homo sapiens

<400> 267
 atgggtatta cagtttttta tttatcttct atttttgcat cttttgttct gggttctagc 60
 atggattctg ttaaagagaa tgttctcaag agcactatct tttattatga tgttgaagaa 120
 gttgaatttc cttatgctag gaagcagact ttacaattta ttgctaaaac ccatttaaaa 180
 tatgctgttt ttaattttga caaaaataaa atgttttcgt acacttttgt ttttgataaa 240
 aaattaatat ctcagtatgc aatcttttatt gaggtaaaaga aaaagtttgg cgaggctaca 300
 ctagtaacgc ctttgaatta tttatgggat cttggtgatt ctattattgt ttttaataaa 360
 aatattttta gaattacttt aaaatcttat atttcaaatt ataataaatg a 411

<210> 268
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 268
 agcatggatt ctgttaaaga gaatgttctc aagagcacta ttttttatta tgatgttgaa 60

gaagttgaat ttccttatgc taggaagcag actttacaat ttattgctaa aacccattta 120
 aaatatgctg tttttaattt tgacaaaaat aaaatgtttt cgtacacttt tgtttttgat 180
 aaaaaattaa tatctcagta tgcaattttt attgaggtaa agaaaaagtt tggcgaggct 240
 acactagtaa cgcctttgaa ttatttatgg gatcttggtg attctattat tgttttaaat 300
 aaaaatattt taagaattac tttaaaatct tatatttcaa attataataa atga 354

<210> 269
 <211> 449
 <212> PRT
 <213> Homo sapiens

<400> 269
 Met Tyr Met Glu Asn Ile Glu Val Arg Gly Gln Pro Asn Phe Phe Gly
 1 5 10 15
 Leu Ile Pro Phe Phe Val Phe Ile Ile Ile Tyr Leu Gly Thr Gly Ile
 20 25 30
 Tyr Leu Gly Val Ile Gly Val Glu Met Ala Phe Tyr Gln Leu Pro Ala
 35 40 45
 Ser Val Ala Met Phe Phe Ala Ser Ile Val Cys Phe Leu Val Phe Lys
 50 55 60
 Gly Lys Phe Ser Asp Lys Ile His Ile Phe Ile Lys Gly Ala Ala Gln
 65 70 75 80
 Tyr Asp Ile Ile Leu Met Cys Leu Ile Phe Met Leu Ser Gly Ala Phe
 85 90 95
 Ser Ser Leu Cys Lys Glu Ile Gly Cys Val Glu Thr Val Ala Asn Leu
 100 105 110
 Gly Ile Lys Tyr Ile Asn Pro Asn Trp Ile Val Ser Gly Ile Phe Phe
 115 120 125
 Val Thr Cys Phe Leu Ser Phe Ser Ala Gly Thr Ser Val Gly Ser Ile
 130 135 140
 Val Ala Ile Ala Pro Ile Ala Phe Asn Ile Ala Val Lys Ser Gly Ile
 145 150 155 160
 Asn Pro Asn Leu Ile Ala Ala Ser Val Met Cys Gly Ala Met Phe Gly
 165 170 175
 Asp Asn Leu Ser Leu Ile Ser Asp Thr Thr Ile Val Ser Ser Arg Thr
 180 185 190
 Gln Gly Ser Ser Ile Leu Asp Val Phe Ile Ser Ser Ser Phe Tyr Ala
 195 200 205
 Phe Pro Ser Ala Ile Leu Thr Phe Phe Ser Phe Phe Phe Leu Ser Glu
 210 215 220
 Asn Leu Ser Asn Ala Thr Asn Phe Leu His Glu Ser Ser Ile Asp Leu
 225 230 235 240
 Val Lys Thr Val Pro Tyr Leu Met Ile Ile Phe Phe Ser Leu Ala Gly
 245 250 255

Met Asn Val Phe Ile Val Leu Phe Leu Gly Ile Leu Ser Ile Cys Leu
 260 265 270
 Ile Ser Val Leu Tyr Gly Asn Leu Tyr Phe Leu Asp Val Met Lys Asn
 275 280 285
 Ile Asn Lys Gly Phe Leu Asn Met Ala Asp Leu Ile Phe Leu Ser Ile
 290 295 300
 Leu Thr Gly Gly Val Ser Phe Ala Val Ile His Asn Gly Gly Phe Lys
 305 310 315 320
 Trp Leu Leu Ile Lys Leu Lys Ser Leu Ile Arg Gly Lys Ser Ser Ala
 325 330 335
 Glu Phe Ser Ile Gly Ala Phe Val Ser Ile Val Asp Val Phe Leu Ala
 340 345 350
 Asn Asn Thr Ile Ala Ile Leu Ile Cys Gly Lys Val Ala Lys Lys Ile
 355 360 365
 Ala Phe Glu Asn Asn Ile Ser Val Gln Arg Ser Ala Ser Ile Leu Asp
 370 375 380
 Met Phe Ser Cys Ile Phe Gln Gly Ile Ile Pro Tyr Gly Ala Gln Met
 385 390 395 400
 Ile Ile Leu Val Asn Phe Ser Asn Gly Leu Val Ser Pro Ile Ser Ile
 405 410 415
 Leu Pro Phe Leu Val Tyr Phe Gly Phe Leu Leu Phe Phe Val Ile Leu
 420 425 430
 Ser Ile Leu Gly Leu Asp Ile Lys Lys Val Phe Leu Phe Phe Leu Lys
 435 440 445

Lys

<210> 270
 <211> 389
 <212> PRT
 <213> Homo sapiens

<400> 270
 Leu Val Phe Lys Gly Lys Phe Ser Asp Lys Ile His Ile Phe Ile Lys
 1 5 10 15
 Gly Ala Ala Gln Tyr Asp Ile Ile Leu Met Cys Leu Ile Phe Met Leu
 20 25 30
 Ser Gly Ala Phe Ser Ser Leu Cys Lys Glu Ile Gly Cys Val Glu Thr
 35 40 45
 Val Ala Asn Leu Gly Ile Lys Tyr Ile Asn Pro Asn Trp Ile Val Ser
 50 55 60
 Gly Ile Phe Phe Val Thr Cys Phe Leu Ser Phe Ser Ala Gly Thr Ser
 65 70 75 80

Val Gly Ser Ile Val Ala Ile Ala Pro Ile Ala Phe Asn Ile Ala Val
 85 90 95
 Lys Ser Gly Ile Asn Pro Asn Leu Ile Ala Ala Ser Val Met Cys Gly
 100 105 110
 Ala Met Phe Gly Asp Asn Leu Ser Leu Ile Ser Asp Thr Thr Ile Val
 115 120 125
 Ser Ser Arg Thr Gln Gly Ser Ser Ile Leu Asp Val Phe Ile Ser Ser
 130 135 140
 Ser Phe Tyr Ala Phe Pro Ser Ala Ile Leu Thr Phe Phe Ser Phe Phe
 145 150 155 160
 Phe Leu Ser Glu Asn Leu Ser Asn Ala Thr Asn Phe Leu His Glu Ser
 165 170 175
 Ser Ile Asp Leu Val Lys Thr Val Pro Tyr Leu Met Ile Ile Phe Phe
 180 185 190
 Ser Leu Ala Gly Met Asn Val Phe Ile Val Leu Phe Leu Gly Ile Leu
 195 200 205
 Ser Ile Cys Leu Ile Ser Val Leu Tyr Gly Asn Leu Tyr Phe Leu Asp
 210 215 220
 Val Met Lys Asn Ile Asn Lys Gly Phe Leu Asn Met Ala Asp Leu Ile
 225 230 235 240
 Phe Leu Ser Ile Leu Thr Gly Gly Val Ser Phe Ala Val Ile His Asn
 245 250 255
 Gly Gly Phe Lys Trp Leu Leu Ile Lys Leu Lys Ser Leu Ile Arg Gly
 260 265 270
 Lys Ser Ser Ala Glu Phe Ser Ile Gly Ala Phe Val Ser Ile Val Asp
 275 280 285
 Val Phe Leu Ala Asn Asn Thr Ile Ala Ile Leu Ile Cys Gly Lys Val
 290 295 300
 Ala Lys Lys Ile Ala Phe Glu Asn Asn Ile Ser Val Gln Arg Ser Ala
 305 310 315 320
 Ser Ile Leu Asp Met Phe Ser Cys Ile Phe Gln Gly Ile Ile Pro Tyr
 325 330 335
 Gly Ala Gln Met Ile Ile Leu Val Asn Phe Ser Asn Gly Leu Val Ser
 340 345 350
 Pro Ile Ser Ile Leu Pro Phe Leu Val Tyr Phe Gly Phe Leu Leu Phe
 355 360 365
 Phe Val Ile Leu Ser Ile Leu Gly Leu Asp Ile Lys Lys Val Phe Leu
 370 375 380
 Phe Phe Leu Lys Lys
 385

<210> 271
 <211> 1350
 <212> DNA
 <213> Homo sapiens

<400> 271
 atgtatatgg aaaatattga agtaagaggg cagccaaatt tttttgggct tattcctttt 60
 tttgtttttta ttattatcta tttaggcacg gggattttatt tgggagttat tgggtgtagaa 120
 atggcctttt atcaactgcc ggctagtgtt gcaatgtttt ttgcttccat tgtttgtttt 180
 ttggtatttta aaggaaaatt ttccgacaaa attcacatat ttattaaagg agcagctcag 240
 tacgatatta tactaatgtg tcttattttt atgctttcgg gagctttctc ttctctttgt 300
 aaagaaatag gctgcgttga aactgtagca aatttgggaa ttaaataat taatcctaata 360
 tggattgttt ctggtatatt ttttgtaacc tgctttcttt ctttttctgc cggcacttct 420
 gttggatcta tcggtgcaat tgctcctatt gcttttaata ttgctgttaa aagcggcatt 480
 aatccgaatt taatagcagc atctgtaatg tgtggagcta tgtttggaga taatctttct 540
 ttaatatcag atacaactat tgtttctagt cgaactcaag gtagtagcat cttagatgtt 600
 tttattagta gcagttttta tgcttttcca tccgccatac taactttttt ttcttttttc 660
 tttctttctg aaaatttgct caatgccaca aactttttac acgaaagttc aatagattta 720
 gtgaaaactg tgccttattt aatgattata tttttctctt tagctggaat gaatgttttt 780
 atagttcttt ttttaggtat tctttctata tgtcttatta gcgttttgta tggtaattta 840
 tactttctag atgtaatgaa aaacattaat aaagggtttt taaatatggc ggatttgatt 900
 tttctttcaa ttttaacagg gggagtttct tttgccgtga ttcataatgg aggcctttaa 960
 tggctactta ttaaattaaa atccttgatt agaggaaaaa gttcagcgga attttctatt 1020
 ggggcttttg tttcaatagt tgatgttttt cttgctaata acacaattgc catacttatt 1080
 tgcggcaaaag tagcaaaaaa gatagctttt gaaaataaca tcagtgttca aagaagtgtc 1140
 tctatttttag atatgttctc ttgtattttt caaggcatta ttccttatgg tgcgcaaatg 1200
 attatttttag tgaatttttc aaatggactt gtgtcgccaa ttagtatttt gccattttta 1260
 gtttattttg gattttttatt gttttttgtt attttatcta ttttgggcct tgatataaaa 1320
 aaagtttttt tatttttttt aaaaaataa 1350

<210> 272
 <211> 1170
 <212> DNA
 <213> Homo sapiens

<400> 272
 ttggtattta aaggaaaatt ttccgacaaa attcacatat ttattaaagg agcagctcag 60
 tacgatatta tactaatgtg tcttattttt atgctttcgg gagctttctc ttctctttgt 120
 aaagaaatag gctgcgttga aactgtagca aatttgggaa ttaaataat taatcctaata 180
 tggattgttt ctggtatatt ttttgtaacc tgctttcttt ctttttctgc cggcacttct 240
 gttggatcta tcggtgcaat tgctcctatt gcttttaata ttgctgttaa aagcggcatt 300
 aatccgaatt taatagcagc atctgtaatg tgtggagcta tgtttggaga taatctttct 360
 ttaatatcag atacaactat tgtttctagt cgaactcaag gtagtagcat cttagatgtt 420
 tttattagta gcagttttta tgcttttcca tccgccatac taactttttt ttcttttttc 480
 tttctttctg aaaatttgct caatgccaca aactttttac acgaaagttc aatagattta 540
 gtgaaaactg tgccttattt aatgattata tttttctctt tagctggaat gaatgttttt 600
 atagttcttt ttttaggtat tctttctata tgtcttatta gcgttttgta tggtaattta 660
 tactttctag atgtaatgaa aaacattaat aaagggtttt taaatatggc ggatttgatt 720
 tttctttcaa ttttaacagg gggagtttct tttgccgtga ttcataatgg aggcctttaa 780
 tggctactta ttaaattaaa atccttgatt agaggaaaaa gttcagcgga attttctatt 840
 ggggcttttg tttcaatagt tgatgttttt cttgctaata acacaattgc catacttatt 900
 tgcggcaaaag tagcaaaaaa gatagctttt gaaaataaca tcagtgttca aagaagtgtc 960
 tctatttttag atatgttctc ttgtattttt caaggcatta ttccttatgg tgcgcaaatg 1020
 attatttttag tgaatttttc aaatggactt gtgtcgccaa ttagtatttt gccattttta 1080
 gtttattttg gattttttatt gttttttgtt attttatcta ttttgggcct tgatataaaa 1140
 aaagtttttt tatttttttt aaaaaataa 1170

<210> 273
 <211> 241
 <212> PRT

<213> Homo sapiens

<400> 273

Met Arg Lys Cys Phe Val Ser Leu Ser Leu Leu Leu Ile Phe Phe Ala
1 5 10 15
Cys Ser Ser Asn Val Glu Ile Glu Leu Asn Asp Asp Ile Ser Gly Ile
20 25 30
Val Ser Ile Phe Val Asn Val Asn Arg Glu Phe Glu Lys Ile Arg Lys
35 40 45
Glu Leu Leu Thr Thr Leu Val Gly Glu Glu Ile Ala Asn Met Pro Leu
50 55 60
Phe Pro Val Asp Glu Ile Lys Lys Tyr Phe Lys Asn Gly Glu Glu Lys
65 70 75 80
Leu Gly Leu Lys Leu Leu Ser Ile Lys Thr Gln Gly Asp Ser Ile Asn
85 90 95
Leu Val Val Lys Phe Asp Asn Leu Ile Lys Ile Leu Gly Asp Tyr Met
100 105 110
Lys Lys Pro Asp Ile Ser Val Phe Lys Ile Glu Lys Lys Asp Gly Lys
115 120 125
Asn Ile Ile Glu Leu Asn Ile Asn Leu Glu Asn Ala Thr Lys Asn Ile
130 135 140
Asn Glu Asn Lys Glu Tyr Ile Ser Asp Ala Leu Ala Ala Leu Leu Pro
145 150 155 160
Ser Asp Glu Ile Pro Met Ser Ala Lys Glu Tyr Lys Asp Val Leu Val
165 170 175
Tyr Phe Leu Ser Asp Phe Thr Ser Lys Ala Ser Glu Leu Ile Asp Asn
180 185 190
Ser Lys Leu Asn Leu Val Val Lys Thr Ser Arg Asn Val Gln Glu Gln
195 200 205
Phe Gly Phe Lys Gln Ile Asn Ser Asn Thr Leu Arg Phe Glu Met Asp
210 215 220
Met Val Lys Gly Leu Ser Leu Glu Thr Pro Ile Lys Leu Arg Leu Val
225 230 235 240
Tyr

<210> 274

<211> 223

<212> PRT

<213> Homo sapiens

<400> 274

Ser Asn Val Glu Ile Glu Leu Asn Asp Asp Ile Ser Gly Ile Val Ser
1 5 10 15

Ile Phe Val Asn Val Asn Arg Glu Phe Glu Lys Ile Arg Lys Glu Leu
 20 25 30
 Leu Thr Thr Leu Val Gly Glu Glu Ile Ala Asn Met Pro Leu Phe Pro
 35 40 45
 Val Asp Glu Ile Lys Lys Tyr Phe Lys Asn Gly Glu Glu Lys Leu Gly
 50 55 60
 Leu Lys Leu Leu Ser Ile Lys Thr Gln Gly Asp Ser Ile Asn Leu Val
 65 70 75 80
 Val Lys Phe Asp Asn Leu Ile Lys Ile Leu Gly Asp Tyr Met Lys Lys
 85 90 95
 Pro Asp Ile Ser Val Phe Lys Ile Glu Lys Lys Asp Gly Lys Asn Ile
 100 105 110
 Ile Glu Leu Asn Ile Asn Leu Glu Asn Ala Thr Lys Asn Ile Asn Glu
 115 120 125
 Asn Lys Glu Tyr Ile Ser Asp Ala Leu Ala Ala Leu Leu Pro Ser Asp
 130 135 140
 Glu Ile Pro Met Ser Ala Lys Glu Tyr Lys Asp Val Leu Val Tyr Phe
 145 150 155 160
 Leu Ser Asp Phe Thr Ser Lys Ala Ser Glu Leu Ile Asp Asn Ser Lys
 165 170 175
 Leu Asn Leu Val Val Lys Thr Ser Arg Asn Val Gln Glu Gln Phe Gly
 180 185 190
 Phe Lys Gln Ile Asn Ser Asn Thr Leu Arg Phe Glu Met Asp Met Val
 195 200 205
 Lys Gly Leu Ser Leu Glu Thr Pro Ile Lys Leu Arg Leu Val Tyr
 210 215 220

<210> 275

<211> 726

<212> DNA

<213> Homo sapiens

<400> 275

atgagaaaagt gttttgtag cttgagttta ttgttgattt tttttgcttg tagctctaata 60
 gttgaaattg agttaaatga tgatattagt ggtattgttt caatatttgt taatgttaata 120
 agagaatttg aaaaaattag aaaagaactc ttaacaactt tgggtgggaga agaaattgca 180
 aatatgcctc tttttcctgt agatgaaata aaaaaatact ttaaaaatgg agaggaaaag 240
 cttgggctta agcttttgag tattaaaacc caaggagatt ctattaattt agttgttaag 300
 tttgataatt taattaaaat tttaggcgat tatatgaaaa aacccgatat atctgtgttt 360
 aagatagaaa aaaaagatgg taaaaatatt attgaactta atattaattt ggaaaacgct 420
 actaagaata ttaatgaaaa taaagaatat attagtgtatg cacttgctgc tcttttgcca 480
 tcggatgaga tcccaatgtc tgccaaagaa tataaagatg ttttggttta ttttttatcg 540
 gattttactt ccaaagcaag tgaacttatt gacaattcca aacttaattt ttagttaaag 600
 acttctagaa atgttcaaga acaatttgga ttcaaacaaa ttaactcaaa cacactgcgg 660
 tttgagatgg atatggttaa aggattaagt cttgaaacac caataaaact tagattagtt 720
 tattga 726

<210> 276

<211> 672
 <212> DNA
 <213> Homo sapiens

<400> 276
 tctaattgttg aaattgagtt aaatgatgat attagtggta ttgtttcaat atttgtaaat 60
 gttaatatagag aatttgaaaa aattagaaaa gaactcttaa caactttggt gggagaagaa 120
 attgcaaata tgcctctttt tctgtagat gaaataaaaa aatactttta aaatggagag 180
 gaaaagcttg ggcttaagct tttgagtatt aaaacccaag gagattctat taatttagtt 240
 gttaagtttg ataatttaaat taaaatttta ggcgattata tgaaaaaacc cgatatatct 300
 gtgtttaaga tagaaaaaaa agatggtaaa aatattattg aacttaatat taatttgga 360
 aacgctacta agaattattaa tgaaaataaa gaatatatta gtgatgcact tgctgctctt 420
 ttgccatcgg atgagatccc aatgtctgcc aaagaatata aagatgtttt ggtttatttt 480
 ttatcggatt ttacttccaa agcaagtga cttattgaca attccaaact taatcttgta 540
 gttaagactt ctagaaatgt tcaagaacaa tttggattca aacaaattaa ctcaaacaca 600
 ctgcggtttg agatggatat ggtaaagga ttaagtcttg aaacaccaat aaaacttaga 660
 ttagtttatt ga 672

<210> 277
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 277
 Met Asn Ile Arg Lys Leu Leu Phe Cys Ile Phe Phe Met Asn Ile Ser
 1 5 10 15
 Phe Leu Leu Phe Ala Gly Asp Tyr Lys Gly Leu Asp Phe Lys Ile Lys
 20 25 30
 Phe Phe Asn Gln Ser Ile Tyr Arg Val Asn Ser Asn Val Phe Ile Glu
 35 40 45
 Val Ser Leu Ser Asn Ala Ser Glu Ser Val Leu Thr Leu Glu Ile Gly
 50 55 60
 Asp Ile Asn Ser Phe Gly Phe Asp Phe Asp Val Thr Asp Thr Thr Asn
 65 70 75 80
 Ile Lys Val Lys Arg Pro Ile Glu Tyr Val Lys Lys Arg Ser Lys Asn
 85 90 95
 Val Ala Ile Pro Val Arg Asn Met Ser Leu Arg Pro Asn Glu Lys Phe
 100 105 110
 Ser Val Val Ile Asn Leu Asn Gln Phe Val Lys Phe Ser Lys Asp Gly
 115 120 125
 Val Tyr Phe Val Lys Gly Ile Phe Phe Pro Asp Ile Ser Asp Pro Ser
 130 135 140
 Lys Lys Lys Glu Ser Asn Ile Ile Thr Leu Phe Leu Asn Asp Gly Phe
 145 150 155 160
 Asp Glu Asn Pro Gly Ser Ile Asp Leu Val Asn Leu Ser Glu Asn Asn
 165 170 175
 Asp Ile Gln Asp Ile Leu Lys Lys Lys Lys Leu Ser Pro Asp Glu Ile
 180 185 190

Val Lys Tyr Leu Leu Lys Ala Leu Gln Leu Gly Lys Lys Glu Lys Phe
 195 200 205
 Phe Leu Tyr Leu Asp Ile Glu Gly Leu Leu Leu Asn Asp Lys Gly Lys
 210 215 220
 Ala Tyr Leu Tyr Lys Gln Lys Leu Ser Pro Ile Pro Asn Lys Asn Val
 225 230 235 240
 Val Glu Glu Tyr Lys Glu Tyr Leu Trp Asn Ser Asn Asn Ser Asp Ile
 245 250 255
 Ser Lys Ala Pro Asn Lys Phe Ser Ile Ile Glu Thr Thr Tyr Ser Asp
 260 265 270
 Thr Ser Gly Lys Val Ile Ala Asp Leu Tyr Phe Asp Asp Gly Gln Phe
 275 280 285
 Tyr Ile Ser Lys Arg Tyr Thr Phe Phe Phe Lys Lys Tyr Asp Tyr Tyr
 290 295 300
 Trp Ile Ile Tyr Asp Tyr Ile Val Gln Asn Thr Gly Ile Lys Glu Lys
 305 310 315 320
 <210> 278
 <211> 299
 <212> PRT
 <213> Homo sapiens
 <400> 278
 Gly Asp Tyr Lys Gly Leu Asp Phe Lys Ile Lys Phe Phe Asn Gln Ser
 1 5 10 15
 Ile Tyr Arg Val Asn Ser Asn Val Phe Ile Glu Val Ser Leu Ser Asn
 20 25 30
 Ala Ser Glu Ser Val Leu Thr Leu Glu Ile Gly Asp Ile Asn Ser Phe
 35 40 45
 Gly Phe Asp Phe Asp Val Thr Asp Thr Thr Asn Ile Lys Val Lys Arg
 50 55 60
 Pro Ile Glu Tyr Val Lys Lys Arg Ser Lys Asn Val Ala Ile Pro Val
 65 70 75 80
 Arg Asn Met Ser Leu Arg Pro Asn Glu Lys Phe Ser Val Val Ile Asn
 85 90 95
 Leu Asn Gln Phe Val Lys Phe Ser Lys Asp Gly Val Tyr Phe Val Lys
 100 105 110
 Gly Ile Phe Phe Pro Asp Ile Ser Asp Pro Ser Lys Lys Lys Glu Ser
 115 120 125
 Asn Ile Ile Thr Leu Phe Leu Asn Asp Gly Phe Asp Glu Asn Pro Gly
 130 135 140
 Ser Ile Asp Leu Val Asn Leu Ser Glu Asn Asn Asp Ile Gln Asp Ile
 145 150 155 160

Leu Lys Lys Lys Lys Leu Ser Pro Asp Glu Ile Val Lys Tyr Leu Leu
 165 170 175
 Lys Ala Leu Gln Leu Gly Lys Lys Glu Lys Phe Phe Leu Tyr Leu Asp
 180 185 190
 Ile Glu Gly Leu Leu Leu Asn Asp Lys Gly Lys Ala Tyr Leu Tyr Lys
 195 200 205
 Gln Lys Leu Ser Pro Ile Pro Asn Lys Asn Val Val Glu Glu Tyr Lys
 210 215 220
 Glu Tyr Leu Trp Asn Ser Asn Asn Ser Asp Ile Ser Lys Ala Pro Asn
 225 230 235 240
 Lys Phe Ser Ile Ile Glu Thr Thr Tyr Ser Asp Thr Ser Gly Lys Val
 245 250 255
 Ile Ala Asp Leu Tyr Phe Asp Asp Gly Gln Phe Tyr Ile Ser Lys Arg
 260 265 270
 Tyr Thr Phe Phe Phe Lys Lys Tyr Asp Tyr Tyr Trp Ile Ile Tyr Asp
 275 280 285
 Tyr Ile Val Gln Asn Thr Gly Ile Lys Glu Lys
 290 295

<210> 279
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 279
 atgaatatta gaaaattgct tttttgtatc ttttttatga atatttcttt tcttttgttt 60
 gcgggagatt acaagggcct tgatttttaa atcaagtttt ttaatcaatc tatttatcgt 120
 gtcaatagta atgtttttat tgaagtttct cttagtaatg cgtctgagag tgttttaact 180
 ttagaatatg gcgatattaa ttcttttggc tttgattttg atgttactga taccaccaat 240
 attaaagtta aaagacctat tgaatatgtt aaaaagagat ctaaaaatgt tgcaattcct 300
 gttagaaata tgagcttgag acctaataaa aaattttctg tagttattaa cttaaatcaa 360
 tttgttaagt ttagtaaaga tggagtttat tttgttaagg gtattttttt cccagacatt 420
 tcagatccat ctaagaaaaa agaatccaat attattacgc tttttttgaa tgatggtttt 480
 gatgaaaatc caggttagcat agaccttggt aatttgtctg aaaataatga tattcaagat 540
 atcttgaaaa agaaaaaatt atctcccgat gaaattgtta aatatttgtt aaaggcattg 600
 cagcttgagg aaaaagaaaa gttcttttta tatcttgata ttgaagggtt gttattaaat 660
 gacaagggca aggcatacct ttataagcaa aggttatcac ctattcccaa taaaaatgta 720
 gttgaagagt ataaagaata tttgtggaat tctaataatt cggatatttc aaaagcacca 780
 aataaatttt ctattattga aactacttat tctgatactt ctggcaagggt gattgctgat 840
 ttatattttg acgatgggca attttatatt tccaaaagat atactttctt ctttaaaaaa 900
 tatgattatt attggataat ttatgattac attgttcaaa atactggcat taaggaaaag 960
 taa 963

<210> 280
 <211> 900
 <212> DNA
 <213> Homo sapiens

<400> 280
 ggagattaca agggccttga ttttaaaatc aagtttttta atcaatctat ttatcgtgtc 60
 aatagtaatg tttttattga agtttctctt agtaatgcgt ctgagagtgt ttttaacttta 120
 gaaataggcg atattaattc ttttggcttt gattttgatg ttactgatac caccaatatt 180

aaagttaaaa gacctattga atatgttaaa aagagatcta aaaatgttgc aattcctggt 240
 agaaatatga gcttgagacc taatgaaaaa ttttctgtag ttattaactt aaatcaattt 300
 gttaagttaa gtaaagatgg agtttatttt gtttaagggtta tttttttccc agacatttca 360
 gatccatcta agaaaaaaga atccaatatt attacgcttt ttttgaatga tggttttgat 420
 gaaaatccag gtagcataga ccttggttaat ttgtctgaaa ataatgatat tcaagatatc 480
 ttgaaaaaga aaaaattatc tcccgatgaa attgttaaatt atttggttaa ggcattgcag 540
 cttgggaaaa aagaaaagt ctttttatat cttgatattg aaggtttggt attaaatgac 600
 aagggcaagg cataccttta taagcaaaag ttatcaccta ttcccaataa aaatgtagtt 660
 gaagagtata aagaatattt gtggaattct aataattcgg atatttcaaa agcaccaa 720
 aaattttcta ttattgaaac tacttattct gatacttctg gcaagggtgat tgctgattta 780
 tattttgacg atgggcaatt ttatatttcc aaaagatata ctttcttctt taaaaaatat 840
 gattattatt ggataattta tgattacatt gttcaaaata ctggcattaa ggaaaagtaa 900

<210> 281
 <211> 171
 <212> PRT
 <213> Homo sapiens

<400> 281
 Met Asn Trp Leu Ser Phe Phe Tyr Val Leu Leu Phe Leu Leu Ile Phe
 1 5 10 15
 Pro Phe Glu Leu Gln Ser Asn Asn Lys Glu Asn Ile Glu Asn Leu Ile
 20 25 30
 Lys Leu His Met Leu Tyr Asp Leu Thr Asn Asn Leu Ser Lys Glu Leu
 35 40 45
 Glu Thr Ile Asn Lys Ile Lys Asn Phe Asp Leu Glu Gln His Tyr Leu
 50 55 60
 Leu Ile Thr Lys Tyr Tyr Leu Lys Ile Lys Lys Tyr Lys Glu Ala Asn
 65 70 75 80
 Asp Phe Leu Lys Lys Ile Asn Gln Lys Lys Ile Lys Asn Gln Lys Ile
 85 90 95
 Lys Asn Glu Ile Ile Ser Leu Lys Leu Arg Ile Asn Glu Asp Asn Ile
 100 105 110
 Asn Glu Glu Glu Ile Lys Lys Ile Leu Asn Asn Glu Lys Asn Ile Asp
 115 120 125
 Val Lys Ile Ile Tyr Gln Ile Phe Ser Leu Ile Lys Phe Lys Asn Lys
 130 135 140
 Lys Leu Ala Asn Lys Ile Lys Asn Ile Ile Leu Thr Asn Tyr Pro Lys
 145 150 155 160
 Ser Ile Tyr Ser Tyr Lys Ile Lys Arg Asn Glu
 165 170

<210> 282
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 282
 Asn Asn Lys Glu Asn Ile Glu Asn Leu Ile Lys Leu His Met Leu Tyr
 1 5 10 15

Asp Leu Thr Asn Asn Leu Ser Lys Glu Leu Glu Thr Ile Asn Lys Ile
 20 25 30
 Lys Asn Phe Asp Leu Glu Gln His Tyr Leu Leu Ile Thr Lys Tyr Tyr
 35 40 45
 Leu Lys Ile Lys Lys Tyr Lys Glu Ala Asn Asp Phe Leu Lys Lys Ile
 50 55 60
 Asn Gln Lys Lys Ile Lys Asn Gln Lys Ile Lys Asn Glu Ile Ile Ser
 65 70 75 80
 Leu Lys Leu Arg Ile Asn Glu Asp Asn Ile Asn Glu Glu Glu Ile Lys
 85 90 95
 Lys Ile Leu Asn Asn Glu Lys Asn Ile Asp Val Lys Ile Ile Tyr Gln
 100 105 110
 Ile Phe Ser Leu Ile Lys Phe Lys Asn Lys Lys Leu Ala Asn Lys Ile
 115 120 125
 Lys Asn Ile Ile Leu Thr Asn Tyr Pro Lys Ser Ile Tyr Ser Tyr Lys
 130 135 140
 Ile Lys Arg Asn Glu
 145

<210> 283
 <211> 516
 <212> DNA
 <213> Homo sapiens

<400> 283
 atgaactggc tatccttttt ttatgtttta ttatttttat taatttttcc ttttgaatta 60
 cagagtaata ataaagaaaa tatagaaaat ttaataaagc tacatatgct ttatgattta 120
 accaataacc tgtcaaaaga attagaaaca ataaataaaa ttaaaaattt tgacttagaa 180
 caacattatc tgctaattac aaaatattat ctaaaaataa aaaaatataa agaagctaatt 240
 gattttttta aaaaaataaa ccaaaaaaag atcaaaaatc aaaaaataaa aaacgaaatc 300
 atttcgctaa aattaagaat aaatgaagat aatattaatg aagaagaaat caaaaaaatt 360
 ttaaataacg aaaaaaatat agatgtcaaa ataatttatc aaatattcag tcttataaaa 420
 tttaaaaata aaaaattagc aaataaaaatt aaaaacataa tactaacaaa ctatcccaaa 480
 agcattttatt cttataaaat aaaaagaaat gaataa 516

<210> 284
 <211> 450
 <212> DNA
 <213> Homo sapiens

<400> 284
 aataataaag aaaatataga aaatttaata aagctacata tgctttatga ttttaaccaat 60
 aacctgtcaa aagaattaga aacaataaat aaaattaaaa attttgactt agaacaacat 120
 tatctgctaa ttacaaaata ttatctaaaa ataaaaaaat ataaagaagc taatgatttt 180
 ttaaaaaaaaa taaaccaaaa aaagatcaaa aatcaaaaaa taaaaaacga aatcatttcg 240
 ctaaaattaa gaataaatga agataatatt aatgaagaag aaatcaaaaa aatttttaaat 300
 aacgaaaaaa atatagatgt caaaataatt tatcaaatat tcagtccttat aaaattttaa 360
 aataaaaaaat tagcaataaa aattaaaaac ataatactaa caaactatcc caaaagcatt 420
 tattcttata aaataaaaaag aaatgaataa 450

<210> 285

<211> 405
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Asn	Ser	Ile	Tyr	Val	Ile	Gly	Lys	Leu	Leu	Leu	Thr	Leu	Phe	Leu
1				5					10					15	
Ile	Phe	Phe	Pro	Phe	Cys	Tyr	Asn	Leu	Phe	Ala	Val	Asn	Leu	Ala	Glu
			20					25					30		
Ile	Asn	Lys	Leu	Ser	Glu	Tyr	Ala	Lys	Ser	Ile	Val	Leu	Ile	Asp	Phe
		35					40					45			
Asp	Thr	Lys	Arg	Ile	Leu	Tyr	Ser	Lys	Lys	Pro	Asn	Leu	Val	Phe	Pro
	50					55					60				
Pro	Ala	Ser	Leu	Thr	Lys	Ile	Val	Thr	Ile	Tyr	Thr	Ala	Leu	Ile	Glu
65					70					75					80
Ala	Glu	Lys	Arg	Asn	Ile	Lys	Leu	Lys	Ser	Ile	Val	Pro	Ile	Ser	Asp
				85					90					95	
Ser	Ala	Ser	Tyr	Tyr	Asn	Ala	Pro	Pro	Asn	Ser	Ser	Leu	Met	Phe	Leu
			100					105					110		
Glu	Lys	Gly	Gln	Ile	Val	Asn	Phe	Glu	Glu	Ile	Leu	Lys	Gly	Leu	Ser
		115					120					125			
Val	Ser	Ser	Gly	Asn	Asp	Ser	Ser	Ile	Ala	Ile	Ala	Glu	Phe	Val	Val
	130					135					140				
Gly	Asn	Leu	Asn	Ser	Phe	Val	Asn	Leu	Met	Asn	Ile	Asn	Val	Leu	Asn
145					150					155					160
Leu	Gly	Leu	Phe	Asn	Met	His	Phe	Val	Glu	Pro	Ser	Gly	Tyr	Ser	Ser
				165					170					175	
Glu	Asn	Lys	Ile	Thr	Ala	Leu	Asp	Met	Ala	Phe	Phe	Val	Lys	Ser	Tyr
			180					185					190		
Ile	Glu	Lys	Phe	Lys	Phe	Met	Leu	Asn	Ile	His	Ser	Leu	Lys	Tyr	Phe
		195					200					205			
Ile	Tyr	Pro	Lys	Ser	Arg	Asn	Leu	Gly	Thr	Ala	Leu	Ser	Ser	Lys	Phe
	210					215					220				
Leu	Asn	Leu	Lys	Gln	Arg	Asn	Ala	Asn	Leu	Leu	Ile	Tyr	Asp	Tyr	Pro
225					230					235					240
Tyr	Ser	Asp	Gly	Ile	Lys	Thr	Gly	Tyr	Ile	Lys	Glu	Ser	Gly	Leu	Asn
			245						250					255	
Leu	Val	Ala	Thr	Ala	Lys	Lys	Gly	Glu	Arg	Arg	Leu	Ile	Ala	Val	Val
			260					265					270		
Leu	Gly	Val	Glu	Lys	Gly	Ile	Asn	Gly	Phe	Gly	Glu	Lys	Met	Arg	Ser
		275					280					285			
Ser	Ile	Ala	Lys	Asn	Leu	Phe	Glu	Tyr	Gly	Phe	Asn	Lys	Tyr	Ser	Lys

290		295		300
Phe Pro Leu Ile Val	Lys Leu Lys Glu Lys Val Tyr Asn Gly Thr Val			
305	310	315		320
Asp Thr Val Ala Leu Phe Ser Lys Glu Pro Phe Tyr Tyr Ile Leu Thr				
	325	330		335
Lys Asp Glu Phe Asp Lys Ile Asn Ile Ser Tyr Thr Val Asp Lys Leu				
	340	345		350
Val Ala Pro Leu Ser Gly Asp Met Pro Val Gly Arg Ala Met Ile Phe				
	355	360		365
Leu Glu Asn Glu Lys Ile Gly Asp Val Ala Leu Phe Ser Gly Lys Val				
	370	375		380
Lys Arg Leu Gly Phe Trp Gln Gly Leu Tyr Lys Ser Phe Ile Asn Leu				
385	390	395		400
Phe Ser Arg Glu Tyr				
	405			
<210> 286				
<211> 378				
<212> PRT				
<213> Homo sapiens				
<400> 286				
Val Asn Leu Ala Glu Ile Asn Lys Leu Ser Glu Tyr Ala Lys Ser Ile				
1	5	10		15
Val Leu Ile Asp Phe Asp Thr Lys Arg Ile Leu Tyr Ser Lys Lys Pro				
	20	25		30
Asn Leu Val Phe Pro Pro Ala Ser Leu Thr Lys Ile Val Thr Ile Tyr				
	35	40		45
Thr Ala Leu Ile Glu Ala Glu Lys Arg Asn Ile Lys Leu Lys Ser Ile				
	50	55		60
Val Pro Ile Ser Asp Ser Ala Ser Tyr Tyr Asn Ala Pro Pro Asn Ser				
65	70	75		80
Ser Leu Met Phe Leu Glu Lys Gly Gln Ile Val Asn Phe Glu Glu Ile				
	85	90		95
Leu Lys Gly Leu Ser Val Ser Ser Gly Asn Asp Ser Ser Ile Ala Ile				
	100	105		110
Ala Glu Phe Val Val Gly Asn Leu Asn Ser Phe Val Asn Leu Met Asn				
	115	120		125
Ile Asn Val Leu Asn Leu Gly Leu Phe Asn Met His Phe Val Glu Pro				
	130	135		140
Ser Gly Tyr Ser Ser Glu Asn Lys Ile Thr Ala Leu Asp Met Ala Phe				
145	150	155		160
Phe Val Lys Ser Tyr Ile Glu Lys Phe Lys Phe Met Leu Asn Ile His				

165	170	175
Ser Leu Lys Tyr Phe Ile Tyr Pro Lys Ser Arg Asn Leu Gly Thr Ala		
180	185	190
Leu Ser Ser Lys Phe Leu Asn Leu Lys Gln Arg Asn Ala Asn Leu Leu		
195	200	205
Ile Tyr Asp Tyr Pro Tyr Ser Asp Gly Ile Lys Thr Gly Tyr Ile Lys		
210	215	220
Glu Ser Gly Leu Asn Leu Val Ala Thr Ala Lys Lys Gly Glu Arg Arg		
225	230	235
Leu Ile Ala Val Val Leu Gly Val Glu Lys Gly Ile Asn Gly Phe Gly		
245	250	255
Glu Lys Met Arg Ser Ser Ile Ala Lys Asn Leu Phe Glu Tyr Gly Phe		
260	265	270
Asn Lys Tyr Ser Lys Phe Pro Leu Ile Val Lys Leu Lys Glu Lys Val		
275	280	285
Tyr Asn Gly Thr Val Asp Thr Val Ala Leu Phe Ser Lys Glu Pro Phe		
290	295	300
Tyr Tyr Ile Leu Thr Lys Asp Glu Phe Asp Lys Ile Asn Ile Ser Tyr		
305	310	315
Thr Val Asp Lys Leu Val Ala Pro Leu Ser Gly Asp Met Pro Val Gly		
325	330	335
Arg Ala Met Ile Phe Leu Glu Asn Glu Lys Ile Gly Asp Val Ala Leu		
340	345	350
Phe Ser Gly Lys Val Lys Arg Leu Gly Phe Trp Gln Gly Leu Tyr Lys		
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<210> 287

<211> 1218

<212> DNA

<213> Homo sapiens

<400> 287

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gaagagattt taaaaggact ttcagtttct tcgggtaatg attcttctat tgcaattgct 420
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 cctgttggga gggctatgat ttttttagaa aatgaaaaaa taggggatgt tgctttgttt 1140
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<210> 288

<211> 1137

<212> DNA

<213> Homo sapiens

<400> 288

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 aatagctttg ttaattttaat gaatattaat gttttaaatt tagggctttt taatatgcat 420
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<210> 289

<211> 500

<212> PRT

<213> Homo sapiens

<400> 289

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 Ile Ser Leu Ile Ala Thr Val Ala Ile Val Ile Phe Tyr Lys Asn Leu
 35 40 45
 Gly Ile Val Asn Thr Ser Leu Ala Met Leu Glu Gly Ala Leu Met Gly
 50 55 60
 Ile Trp Pro Ile Ala Thr Val Ile Ile Ala Ala Ile Phe Thr Tyr Lys
 65 70 75 80
 Met Ser Glu Asp Gln Lys Asp Ile Glu Thr Ile Lys Asn Ile Leu Ser
 85 90 95
 Asn Val Ser Ser Asp Arg Arg Ile Ile Val Leu Leu Val Ala Trp Gly

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Ile	Pro	Val	Ser	Ile	Leu	Ile	Ala	Met	Gly	Phe	Glu	Pro	Phe	Phe	Ala
	130					135					140				
Cys	Leu	Ile	Cys	Leu	Ile	Met	Asn	Thr	Ser	Ser	Thr	Ala	Tyr	Gly	Ser
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Val	Gly	Ile	Pro	Ile	Thr	Ser	Leu	Ala	Gln	Ala	Thr	Asn	Leu	Asp	Val
				165					170					175	
Asn	Ile	Val	Ser	Ser	Glu	Ile	Ala	Phe	Gln	Leu	Ile	Leu	Pro	Thr	Leu
		180						185					190		
Thr	Ile	Pro	Phe	Val	Leu	Val	Ile	Leu	Thr	Gly	Gly	Gly	Ile	Lys	Gly
		195					200					205			
Leu	Lys	Gly	Val	Phe	Leu	Leu	Thr	Leu	Leu	Ser	Gly	Met	Ser	Met	Ala
	210					215					220				
Ile	Ser	Gln	Val	Phe	Ile	Ser	Lys	Thr	Leu	Gly	Pro	Glu	Leu	Pro	Ala
225					230					235					240
Ile	Leu	Gly	Ser	Ile	Leu	Ser	Met	Thr	Ile	Thr	Ile	Val	Tyr	Ala	Arg
				245					250					255	
Phe	Phe	Gly	Asn	Lys	Glu	Thr	Thr	Glu	Arg	Gln	Ser	Lys	Asn	Thr	Ile
			260					265					270		
Ser	Leu	Ser	Lys	Gly	Ile	Ile	Ala	Cys	Ser	Pro	Tyr	Ile	Leu	Ile	Val
		275					280					285			
Thr	Phe	Ile	Val	Leu	Val	Ser	Pro	Leu	Phe	Asn	Lys	Ile	His	Glu	Tyr
	290					295					300				
Leu	Lys	Thr	Phe	Gln	Ser	Thr	Ile	Ser	Ile	Tyr	Pro	Glu	Ala	Asn	Pro
305					310					315				320	
Leu	His	Phe	Lys	Trp	Ile	Ile	Ser	Pro	Gly	Phe	Leu	Ile	Ile	Leu	Ala
				325					330					335	
Thr	Thr	Ile	Ser	Tyr	Ser	Ile	Arg	Gly	Val	Pro	Met	Leu	Lys	Gln	Leu
			340					345					350		
Lys	Ile	Phe	Thr	Leu	Thr	Leu	Lys	Lys	Met	Ala	Leu	Ser	Ser	Phe	Ile
		355					360					365			
Ile	Ile	Cys	Ile	Val	Ala	Ile	Ser	Arg	Leu	Met	Thr	His	Ser	Gly	Met
		370				375					380				
Ile	Arg	Asp	Leu	Ala	Asn	Gly	Ile	Ser	Ile	Ile	Thr	Gly	Lys	Phe	Gly
385					390					395					400
Pro	Leu	Phe	Ser	Pro	Leu	Ile	Gly	Ala	Ile	Gly	Thr	Phe	Leu	Thr	Gly
				405					410					415	
Ser	Asp	Thr	Val	Ser	Asn	Val	Leu	Phe	Gly	Pro	Leu	Gln	Thr	Gln	Met

420 425 430
 Ala Glu Asn Ile Gly Ala Asn Pro Tyr Trp Leu Ala Ala Ala Asn Thr
 435 440 445
 Thr Gly Ala Thr Gly Gly Lys Met Ile Ser Pro Gln Asn Ile Thr Ile
 450 455 460
 Ala Thr Thr Thr Ala Gly Leu Ile Gly Gln Glu Gly Lys Leu Leu Ser
 465 470 475 480
 Lys Thr Ile Ile Tyr Ala Leu Tyr Tyr Ile Leu Ala Thr Gly Leu Leu
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 Val Tyr Leu Val
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 <210> 290
 <211> 416
 <212> PRT
 <213> Homo sapiens

 <400> 290
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 Leu Glu Gly Val Ala Gly Tyr Gly Thr Ala Val Ala Ile Pro Val Ser
 35 40 45
 Ile Leu Ile Ala Met Gly Phe Glu Pro Phe Phe Ala Cys Leu Ile Cys
 50 55 60
 Leu Ile Met Asn Thr Ser Ser Thr Ala Tyr Gly Ser Val Gly Ile Pro
 65 70 75 80
 Ile Thr Ser Leu Ala Gln Ala Thr Asn Leu Asp Val Asn Ile Val Ser
 85 90 95
 Ser Glu Ile Ala Phe Gln Leu Ile Leu Pro Thr Leu Thr Ile Pro Phe
 100 105 110
 Val Leu Val Ile Leu Thr Gly Gly Gly Ile Lys Gly Leu Lys Gly Val
 115 120 125
 Phe Leu Leu Thr Leu Leu Ser Gly Met Ser Met Ala Ile Ser Gln Val
 130 135 140
 Phe Ile Ser Lys Thr Leu Gly Pro Glu Leu Pro Ala Ile Leu Gly Ser
 145 150 155 160
 Ile Leu Ser Met Thr Ile Thr Ile Val Tyr Ala Arg Phe Phe Gly Asn
 165 170 175
 Lys Glu Thr Thr Glu Arg Gln Ser Lys Asn Thr Ile Ser Leu Ser Lys
 180 185 190
 Gly Ile Ile Ala Cys Ser Pro Tyr Ile Leu Ile Val Thr Phe Ile Val

195 200 205
 Leu Val Ser Pro Leu Phe Asn Lys Ile His Glu Tyr Leu Lys Thr Phe
 210 215 220
 Gln Ser Thr Ile Ser Ile Tyr Pro Glu Ala Asn Pro Leu His Phe Lys
 225 230 235 240
 Trp Ile Ile Ser Pro Gly Phe Leu Ile Ile Leu Ala Thr Thr Ile Ser
 245 250 255
 Tyr Ser Ile Arg Gly Val Pro Met Leu Lys Gln Leu Lys Ile Phe Thr
 260 265 270
 Leu Thr Leu Lys Lys Met Ala Leu Ser Ser Phe Ile Ile Ile Cys Ile
 275 280 285
 Val Ala Ile Ser Arg Leu Met Thr His Ser Gly Met Ile Arg Asp Leu
 290 295 300
 Ala Asn Gly Ile Ser Ile Ile Thr Gly Lys Phe Gly Pro Leu Phe Ser
 305 310 315 320
 Pro Leu Ile Gly Ala Ile Gly Thr Phe Leu Thr Gly Ser Asp Thr Val
 325 330 335
 Ser Asn Val Leu Phe Gly Pro Leu Gln Thr Gln Met Ala Glu Asn Ile
 340 345 350
 Gly Ala Asn Pro Tyr Trp Leu Ala Ala Ala Asn Thr Thr Gly Ala Thr
 355 360 365
 Gly Gly Lys Met Ile Ser Pro Gln Asn Ile Thr Ile Ala Thr Thr Thr
 370 375 380
 Ala Gly Leu Ile Gly Gln Glu Gly Lys Leu Leu Ser Lys Thr Ile Ile
 385 390 395 400
 Tyr Ala Leu Tyr Tyr Ile Leu Ala Thr Gly Leu Leu Val Tyr Leu Val
 405 410 415

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 <212> DNA
 <213> Homo sapiens

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<210> 292

<211> 1171

<212> DNA

<213> Homo sapiens

<400> 292

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 actgctgttg caattcctgt atcaatatta atagcaatgg gatttgaacc attttttgcc 180
 tgcttaatct gtttaataat gaacacctca tcaaccgcct acggatctgt gggaatccct 240
 ataacatctt tagctcaagc aactaacttg gatgttaaca ttgtttcatc tgagattgca 300
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 ggcattaaag gattaaaagg agtattcctt cttaccttac tctcaggaat gtcaatggca 420
 atatctcaag tatttatatc aaaaactttg ggtccagaac ttcttgcaat ccttggaagc 480
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 ctaaaaactt ttcaaagcac tatttagcatt tatccagaag caaatccctt acacttttaa 720
 tggattatct ctccgggctt cttgattata cttgcaacaa caatatccta ttcaatacgg 780
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<210> 293

<211> 250

<212> PRT

<213> Homo sapiens

<400> 293

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 20 25 30

Ile Leu Ile Leu Phe Ser Phe Leu Gly Val Phe Arg Ile Tyr Phe Thr
 35 40 45

Arg Asp Tyr Ser Tyr Ser Arg Ser Arg Glu Phe Glu Phe Tyr Lys Leu
 50 55 60

Ser Phe Leu Leu Met Ala Lys Leu Leu Ser Ile Leu Gly Thr Val Thr

65		70		75		80									
Gly	Glu	Gln	Leu	Asn	Tyr	Val	Asn	Phe	Ile	Ile	Asn	Ser	Leu	Asn	Leu
				85					90					95	
Ser	Glu	Arg	Gly	Lys	Ser	Glu	Leu	Tyr	Thr	Ile	Phe	His	Ser	Ala	Ile
			100					105					110		
Thr	Lys	Asn	Asn	Asn	Ala	Asp	Lys	Ile	Leu	Tyr	Thr	Leu	Lys	Leu	Gly
		115					120					125			
Tyr	Phe	Gln	His	Lys	Asp	Leu	Phe	Ile	Trp	Leu	Phe	Ala	Thr	Leu	Lys
	130					135					140				
Glu	Ile	Asn	Arg	Leu	Ser	Arg	Tyr	Lys	Asn	Leu	Glu	Ala	Glu	Lys	Phe
145					150					155					160
Ile	Ser	Tyr	Val	Gly	Val	Phe	Leu	Glu	Leu	Glu	Ser	Asp	Gly	Tyr	Glu
				165					170					175	
Ala	Tyr	Lys	Asp	Ile	Asn	Ile	Lys	Ile	Val	Asn	Pro	Tyr	Ser	Val	Leu
			180					185					190		
Gly	Leu	Thr	Tyr	Ser	Ala	Ser	Asp	Asp	Glu	Val	Lys	Lys	Ala	Tyr	Lys
		195					200					205			
Ser	Leu	Val	Ile	Lys	Tyr	His	Pro	Asp	Lys	Phe	Ala	Asn	Asp	Pro	Val
	210					215					220				
Arg	Gln	Lys	Asp	Ala	Asn	Asp	Lys	Phe	Ile	Lys	Ile	Gln	Asp	Ala	Tyr
225					230					235					240
Glu	Lys	Ile	Cys	Lys	Glu	Arg	Asn	Ile	Arg						
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<210> 294
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 294															
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			20					25					30		
Gly	Thr	Val	Thr	Gly	Glu	Gln	Leu	Asn	Tyr	Val	Asn	Phe	Ile	Ile	Asn
		35					40					45			
Ser	Leu	Asn	Leu	Ser	Glu	Arg	Gly	Lys	Ser	Glu	Leu	Tyr	Thr	Ile	Phe
	50					55					60				
His	Ser	Ala	Ile	Thr	Lys	Asn	Asn	Asn	Ala	Asp	Lys	Ile	Leu	Tyr	Thr
65					70					75				80	
Leu	Lys	Leu	Gly	Tyr	Phe	Gln	His	Lys	Asp	Leu	Phe	Ile	Trp	Leu	Phe
			85						90					95	
Ala	Thr	Leu	Lys	Glu	Ile	Asn	Arg	Leu	Ser	Arg	Tyr	Lys	Asn	Leu	Glu

100	105	110
Ala Glu Lys Phe Ile Ser Tyr Val Gly Val Phe Leu Glu Leu Glu Ser		
115	120	125
Asp Gly Tyr Glu Ala Tyr Lys Asp Ile Asn Ile Lys Ile Val Asn Pro		
130	135	140
Tyr Ser Val Leu Gly Leu Thr Tyr Ser Ala Ser Asp Asp Glu Val Lys		
145	150	155
Lys Ala Tyr Lys Ser Leu Val Ile Lys Tyr His Pro Asp Lys Phe Ala		
165	170	175
Asn Asp Pro Val Arg Gln Lys Asp Ala Asn Asp Lys Phe Ile Lys Ile		
180	185	190
Gln Asp Ala Tyr Glu Lys Ile Cys Lys Glu Arg Asn Ile Arg		
195	200	205

<210> 295
 <211> 753
 <212> DNA
 <213> Homo sapiens

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 ggtgttttta gaataactt tacaagggat tactcatatt ctagatctag agagtttgaa 180
 ttttataaac tttctttttt attaatggct aaattgctat ctatttttagg aactgtaact 240
 ggggagcagc taaattatgt caatttttatt atcaattcct tgaatttgct tgaacgtggt 300
 aaatcagaat tgtataccat ttttcattct gctattacta aaaataataa tgctgataaa 360
 attttatata cccttaagct tgggtatttt cagcaciaag atctttttat atggcctttt 420
 gccactctta aagaaattaa caggctttct aggtataaaa atttagaagc tgaaaaattt 480
 atttcttatg ttggtgtttt tttagaactt gaatctgatg gttatgaagc ttataaagat 540
 attaatatta aaattgtaaa tccttatagt gttttggggt taacatatag tgctagcgat 600
 gatgagggtta aaaaggcgta taaaagcctt gttataaaat atcatcctga taagtttgca 660
 aatgatcctg taagacaaaa agatgcaaat gataaattta taaaaattca agatgcttat 720
 gaaaaaattt gcaaggaaag aaatataagg taa 753

<210> 296
 <211> 621
 <212> DNA
 <213> Homo sapiens

<400> 296
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 aattatgtca attttattat caattctttg aatttgctg aacgtggtaa atcagaattg 180
 tataccattt ttcattctgc tattactaaa aataataatg ctgataaaaat tttatatacc 240
 cttaagcttg gttattttca gcacaaagat ctttttatat ggctttttgc cactcttaaa 300
 gaaatttaaca ggctttctag gtataaaaat ttagaagctg aaaaatttat ttcttatggt 360
 ggtgtttttt tagaacttga atctgatggt tatgaagctt ataaagatat taatattaaa 420
 attgtaaatc cttatagtgt tttgggggta acatatagtg cttagcgatga tgagggttaa 480
 aaggcgata aaagccttgt tataaaatat catcctgata agtttgcaaa tgatcctgta 540
 agacaaaaag atgcaaatga taaatttata aaaattcaag atgcttatga aaaaatttgc 600
 aaggaaagaa atataaggta a 621

<210> 297
 <211> 323

<212> PRT

<213> Homo sapiens

<400> 297

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20 25 30
Gln Asp Lys Asn Val Lys Ile Leu Gly Phe Leu Glu Lys Ile Gln Ala
35 40 45
Asp Asn Lys Glu Ile Val Glu Lys His Ile Glu Lys Lys Glu Lys Gln
50 55 60
Met Val Gln Ala Ala Ser Val Ala Pro Ile Asn Val Glu Ser Asn Phe
65 70 75 80
Pro Tyr Tyr Leu Gln Glu Glu Ile Glu Ile Lys Glu Glu Glu Leu Val
85 90 95
Pro Asn Thr Asp Glu Glu Lys Lys Ala Glu Lys Ala Ile Ser Asp Gly
100 105 110
Ser Leu Glu Phe Ala Lys Leu Val Asp Asp Glu Asn Lys Leu Lys Asn
115 120 125
Glu Ser Ala Gln Leu Glu Ser Ser Phe Asn Asn Val Tyr Lys Glu Ile
130 135 140
Leu Glu Leu Ala Asp Leu Ile Gln Ala Glu Val His Val Ala Gly Arg
145 150 155 160
Ile Asn Ser Tyr Ile Lys Lys Arg Lys Thr Thr Lys Glu Lys Glu Tyr
165 170 175
Lys Lys Arg Glu Ile Lys Asn Lys Ile Glu Lys Gln Ala Leu Ile Lys
180 185 190
Leu Phe Asn Gln Leu Leu Glu Lys Arg Gly Asp Ile Glu Asn Leu His
195 200 205
Thr Gln Leu Asn Ser Gly Leu Ser Glu Arg Ala Ser Ala Lys Tyr Phe
210 215 220
Phe Glu Lys Ala Lys Glu Thr Leu Lys Ala Ala Ile Thr Glu Arg Leu
225 230 235 240
Asn Asn Lys Arg Lys Asn Arg Pro Trp Trp Ala Arg Arg Thr His Ser
245 250 255
Asn Leu Ala Ile Gln Ala Lys Asn Glu Ala Glu Asp Ala Leu Asn Gln
260 265 270
Leu Ser Thr Ser Ser Phe Arg Ile Leu Glu Ala Met Lys Ile Lys Glu
275 280 285
Asp Val Lys Gln Leu Leu Glu Glu Val Lys Ser Phe Leu Asp Ser Ser
290 295 300

Lys Ser Lys Ile Phe Ser Ser Gly Asp Arg Leu Tyr Asp Phe Leu Glu
 305 310 315 320

Thr Ser Lys

<210> 298
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 298
 Asn Glu Leu Thr Arg Lys Lys Met Gln Asp Lys Asn Val Lys Ile Leu
 1 5 10 15

Gly Phe Leu Glu Lys Ile Gln Ala Asp Asn Lys Glu Ile Val Glu Lys
 20 25 30

His Ile Glu Lys Lys Glu Lys Gln Met Val Gln Ala Ala Ser Val Ala
 35 40 45

Pro Ile Asn Val Glu Ser Asn Phe Pro Tyr Tyr Leu Gln Glu Glu Ile
 50 55 60

Glu Ile Lys Glu Glu Glu Leu Val Pro Asn Thr Asp Glu Glu Lys Lys
 65 70 75 80

Ala Glu Lys Ala Ile Ser Asp Gly Ser Leu Glu Phe Ala Lys Leu Val
 85 90 95

Asp Asp Glu Asn Lys Leu Lys Asn Glu Ser Ala Gln Leu Glu Ser Ser
 100 105 110

Phe Asn Asn Val Tyr Lys Glu Ile Leu Glu Leu Ala Asp Leu Ile Gln
 115 120 125

Ala Glu Val His Val Ala Gly Arg Ile Asn Ser Tyr Ile Lys Lys Arg
 130 135 140

Lys Thr Thr Lys Glu Lys Glu Tyr Lys Lys Arg Glu Ile Lys Asn Lys
 145 150 155 160

Ile Glu Lys Gln Ala Leu Ile Lys Leu Phe Asn Gln Leu Leu Glu Lys
 165 170 175

Arg Gly Asp Ile Glu Asn Leu His Thr Gln Leu Asn Ser Gly Leu Ser
 180 185 190

Glu Arg Ala Ser Ala Lys Tyr Phe Phe Glu Lys Ala Lys Glu Thr Leu
 195 200 205

Lys Ala Ala Ile Thr Glu Arg Leu Asn Asn Lys Arg Lys Asn Arg Pro
 210 215 220

Trp Trp Ala Arg Arg Thr His Ser Asn Leu Ala Ile Gln Ala Lys Asn
 225 230 235 240

Glu Ala Glu Asp Ala Leu Asn Gln Leu Ser Thr Ser Ser Phe Arg Ile
 245 250 255

Leu Glu Ala Met Lys Ile Lys Glu Asp Val Lys Gln Leu Leu Glu Glu
 260 265 270

Val Lys Ser Phe Leu Asp Ser Ser Lys Ser Lys Ile Phe Ser Ser Gly
 275 280 285

Asp Arg Leu Tyr Asp Phe Leu Glu Thr Ser Lys
 290 295

<210> 299
 <211> 972
 <212> DNA
 <213> Homo sapiens

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 ggatttttag agaaaaattca agcagataat aaagaaattg ttgaaaaaca tatagaaaaa 180
 aaagaaaaaac aaatgggtgca ggctgcttct gtagcaccta ttaatgtaga gagtaatttc 240
 ccatattatc ttcaagaaga aatagagata aaagaagaag agttgggtcc aaatactgat 300
 gaagaaaaga aggcagagaa ggcaattagc gatgggagtc ttgaatttgc taaattagtt 360
 gatgatgaaa ataaacttaa aaatgaatct gcgcaattag aatctagttt taataatggt 420
 tataaagaaa tcttagaact tgcagattta atacaagcag aggtgcatgt tgcaggaagg 480
 ataaatagct atataaaaaa agaaaagacc actaaagaaa aagaatataa gaagagagaa 540
 attaagaata agatagaaaa acaggctcta attaatgtgt tcaatcagtt attagaaaaa 600
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 gcaaaatact tttttgagaa agccaaagaa actttaaaag ctgctattac tgaaagatta 720
 aataacaaac gtaaaaatcg gccatggtgg gcaagaagaa cacatagtaa tttagcaata 780
 caggcaaaaa atgaggcaga ggatgcttta aaccaattaa gtacttcttc ttttaggata 840
 cttgaagcaa tgaaaataaa ggaagatgta aaacagcttc ttgaagaagt aaaatctttt 900
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 acgagtaaat aa 972

<210> 300
 <211> 900
 <212> DNA
 <213> Homo sapiens

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 atgggtgcagg ctgcttctgt agcacctatt aatgtagaga gtaatttccc atattatctt 180
 caagaagaaa tagagataaa agaagaagag ttggttccaa atactgatga agaaaagaag 240
 gcagagaagg caattagcga tgggagtcct gaatttgcta aattagttga tgatgaaaat 300
 aaacttaaaa atgaatctgc gcaattagaa tctagtttta ataatgttta taaagaaatc 360
 ttagaacttg cagatttaat acaagcagag gtgcatgttg caggaaggat aaatagctat 420
 ataaaaaaaa gaaagaccac taaagaaaaa gaatataaga agagagaaat taagaataag 480
 atagaaaaac aggtctaat taagtgttcc aatcagttat tagaaaaaag aggcgatatt 540
 gaaaatcttc atactcaatt aaatagtggg cttagcgaga gagcatctgc aaaatacttt 600
 tttgagaaaag ccaaagaaac tttaaaagct gctattactg aaagattaaa taacaaacgt 660
 aaaaatcggc catggtgggc aagaagaaca catagtaatt tagcaataca ggcaaaaaat 720
 gaggcagagg atgcttttaa ccaattaagt acttcttctt ttaggatact tgaagcaatg 780
 aaaataaagg aagatgtaaa acagcttctt gaagaagtaa aatcttttct agattcttca 840
 aagagcaaaa tcttttctag tggcgataga ttatatgatt ttttagagac gagtaaataa 900

<210> 301
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 301

Met Asn Lys Lys Ile Leu Thr Leu Leu Val Leu Ile Leu Ser Ile Ser
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Ser Val Leu Met Leu Ser Lys Ser Ile Thr Lys Lys Ser Lys Tyr Lys
20 25 30

Ile Ile Arg Asp Tyr Phe Ile Asn Ser Asn Tyr Val Leu Val Lys Ile
35 40 45

Glu Asn Lys Asp Leu Lys Phe Thr Ile Ser Lys Pro Ile Tyr Asp Lys
50 55 60

Lys Leu Asn Asn Tyr Phe Phe Lys Gly Gln Thr Thr Ser His Phe Leu
65 70 75 80

Ile Ser Asn Asn Val Asp Ile Ala Ile Asn Thr Ser Pro Tyr Glu Val
85 90 95

Lys Gln Asn Met Phe Phe Pro Lys Gly Leu Tyr Ile Tyr Asn Lys Lys
100 105 110

Met Ile Ser Lys Gln Ile Asn Asn Tyr Gly Glu Ile Val Ile Lys His
115 120 125

Asn Lys Ile Ile Leu Asn Pro Lys Glu Asp Glu Ile Glu Asn Cys Asp
130 135 140

Tyr Gly Phe Ser Gly Phe Phe Val Leu Ile Lys Asn Gly Lys Tyr Lys
145 150 155 160

Lys Asn Phe Lys Glu Thr Arg His Pro Arg Thr Ile Ile Gly Thr Asp
165 170 175

Lys Asn Asn Lys His Leu Phe Leu Val Thr Ile Glu Gly Arg Gly Val
180 185 190

Asn Asn Ser Lys Gly Ala Ser Leu Asn Glu Ala Ile Asp Phe Ala Leu
195 200 205

Ser Tyr Gly Met Thr Asn Ala Ile Asn Leu Asp Gly Gly Gly Ser Ser
210 215 220

Thr Leu Val Val Lys Ser Asn Asn Ala Pro Tyr Lys Leu Asn Phe Thr
225 230 235 240

Ala Asn Ile Phe Gly Gln Glu Arg Pro Val Pro Phe His Leu Gly Ile
245 250 255

Lys Leu Pro Asn
260

<210> 302

<211> 240

<212> PRT

<213> Homo sapiens

<400> 302

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 Tyr Phe Ile Asn Ser Asn Tyr Val Leu Val Lys Ile Glu Asn Lys Asp
 20 25 30
 Leu Lys Phe Thr Ile Ser Lys Pro Ile Tyr Asp Lys Lys Leu Asn Asn
 35 40 45
 Tyr Phe Phe Lys Gly Gln Thr Thr Ser His Phe Leu Ile Ser Asn Asn
 50 55 60
 Val Asp Ile Ala Ile Asn Thr Ser Pro Tyr Glu Val Lys Gln Asn Met
 65 70 75 80
 Phe Phe Pro Lys Gly Leu Tyr Ile Tyr Asn Lys Lys Met Ile Ser Lys
 85 90 95
 Gln Ile Asn Asn Tyr Gly Glu Ile Val Ile Lys His Asn Lys Ile Ile
 100 105 110
 Leu Asn Pro Lys Glu Asp Glu Ile Glu Asn Cys Asp Tyr Gly Phe Ser
 115 120 125
 Gly Phe Phe Val Leu Ile Lys Asn Gly Lys Tyr Lys Lys Asn Phe Lys
 130 135 140
 Glu Thr Arg His Pro Arg Thr Ile Ile Gly Thr Asp Lys Asn Asn Lys
 145 150 155 160
 His Leu Phe Leu Val Thr Ile Glu Gly Arg Gly Val Asn Asn Ser Lys
 165 170 175
 Gly Ala Ser Leu Asn Glu Ala Ile Asp Phe Ala Leu Ser Tyr Gly Met
 180 185 190
 Thr Asn Ala Ile Asn Leu Asp Gly Gly Gly Ser Ser Thr Leu Val Val
 195 200 205
 Lys Ser Asn Asn Ala Pro Tyr Lys Leu Asn Phe Thr Ala Asn Ile Phe
 210 215 220
 Gly Gln Glu Arg Pro Val Pro Phe His Leu Gly Ile Lys Leu Pro Asn
 225 230 235 240

<210> 303

<211> 783

<212> DNA

<213> Homo sapiens

<400> 303

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 agcaattatg ttctggtgaa aattgaaaat aaagatctaa aatttaccat atcaaaacct 180
 atttacgaca aaaagctaaa taattacttc tttaaaggcc aaacaacaag ccattttctta 240
 atttctaaca atgttgacat tgcaattaac acaagtccat acgaagttaa acaaaacatg 300
 tttttcccaa aaggactata catatataat aaaaaaatga tttcaaaaca aataaataac 360
 tacggagaga ttgtaataaa gcacaacaaa attatattaa atcccaagga agacgaaata 420
 gaaaactgcg attatggatt tagcggattt tttgttttaa tcaaaaacgg aaagtataaa 480
 aaaaatttta aagaaacaag gcacccaaga acaataatag gaactgataa aaataacaag 540
 catttatttc ttgttacaat agaaggaagg ggtgtcaata atagcaaagg ggcctctctt 600

aatgaagcta ttgattttgc attaagctac ggcattgacta acgctattaa tctagacggg 660
 ggggggtcaa gcactcttgt tgtaaaatca aataacgctc cttacaaatt aaacttcaca 720
 gcaaacatct ttggacagga aagacctgtc ccatttcatt taggaataaa acttccta 780
 tga 783

<210> 304
 <211> 723
 <212> DNA
 <213> Homo sapiens

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 atttacgaca aaaagctaaa taattacttc tttaaaggcc aaacaacaag ccatttctta 180
 atttctaaca atgttgacat tgcaattaac acaagtccat acgaagttaa acaaaacatg 240
 tttttcccaa aaggactata catatataat aaaaaaatga tttcaaaaca aataaataac 300
 tacggagaga ttgtaataaa gcacaacaaa attatattaa atcccaagga agacgaaata 360
 gaaaactgcg attatggatt tagcggattt tttgttttaa tcaaaaaacgg aaagtataaa 420
 aaaaatttta aagaaacaag gcaccaaga acaataatag gaactgataa aaataacaag 480
 catttatttc ttgttacaat agaaggaagg ggtgtcaata atagcaaagg ggcctctctt 540
 aatgaagcta ttgattttgc attaagctac ggcattgacta acgctattaa tctagacggg 600
 ggggggtcaa gcactcttgt tgtaaaatca aataacgctc cttacaaatt aaacttcaca 660
 gcaaacatct ttggacagga aagacctgtc ccatttcatt taggaataaa acttccta 720
 tga 723

<210> 305
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 305
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 Leu Phe Leu Val Tyr Ala Ile Val Tyr Leu Ala Ser Pro Phe Val Asn
 20 25 30
 Val Asn Ser Glu Phe Trp Asn Val Asp Glu Asn His Phe Tyr Phe Trp
 35 40 45
 Ile Ser Arg Ser Phe Leu Ile Ile Phe Ile Ile Tyr Phe Phe Lys Leu
 50 55 60
 Thr Ser Ser Tyr Asp Asp Phe Arg Val Glu Phe Phe Ile Pro Lys Phe
 65 70 75 80
 Lys Phe Ile Phe Leu Trp Asp Ser Val Leu Ile Phe Ile Lys Thr Ile
 85 90 95
 Leu Ile Ala Met Ile Val Ile Phe Leu Ile Ala Phe Leu Leu Glu Tyr
 100 105 110
 Leu Leu Pro Glu Ser Val Leu Val Tyr Tyr Phe Gln Asn Asn Ala Gly
 115 120 125
 Phe Asn Trp Lys Ile Ser Ser Lys Lys Ala Phe Phe Leu Met Thr Phe
 130 135 140
 Thr Ser Phe Phe Thr Gly Ala Phe Glu Glu Leu Phe Tyr Arg Ala Phe
 145 150 155 160

Val Ile Thr Lys Phe Thr Gln Met Gly Phe Pro Val Val Ala Thr Ala
165 170 175

Ile Leu Ser Ser Met Phe Phe Ala Tyr Gly His Leu Tyr Tyr Gly Ile
180 185 190

Leu Gly Phe Leu Val Thr Phe Ile Leu Gly Ile Phe Phe Ala Phe Thr
195 200 205

Tyr Leu Arg Tyr Lys Asn Val Tyr Tyr Val Ile Phe Ile His Ser Phe
210 215 220

Tyr Asn Ile Ile Val Ser Ser Leu Leu Leu Phe Leu Asn
225 230 235

<210> 306

<211> 204

<212> PRT

<213> Homo sapiens

<400> 306

Asn Ser Glu Phe Trp Asn Val Asp Glu Asn His Phe Tyr Phe Trp Ile
1 5 10 15

Ser Arg Ser Phe Leu Ile Ile Phe Ile Ile Tyr Phe Phe Lys Leu Thr
20 25 30

Ser Ser Tyr Asp Asp Phe Arg Val Glu Phe Phe Ile Pro Lys Phe Lys
35 40 45

Phe Ile Phe Leu Trp Asp Ser Val Leu Ile Phe Ile Lys Thr Ile Leu
50 55 60

Ile Ala Met Ile Val Ile Phe Leu Ile Ala Phe Leu Leu Glu Tyr Leu
65 70 75 80

Leu Pro Glu Ser Val Leu Val Tyr Tyr Phe Gln Asn Asn Ala Gly Phe
85 90 95

Asn Trp Lys Ile Ser Ser Lys Lys Ala Phe Phe Leu Met Thr Phe Thr
100 105 110

Ser Phe Phe Thr Gly Ala Phe Glu Glu Leu Phe Tyr Arg Ala Phe Val
115 120 125

Ile Thr Lys Phe Thr Gln Met Gly Phe Pro Val Val Ala Thr Ala Ile
130 135 140

Leu Ser Ser Met Phe Phe Ala Tyr Gly His Leu Tyr Tyr Gly Ile Leu
145 150 155 160

Gly Phe Leu Val Thr Phe Ile Leu Gly Ile Phe Phe Ala Phe Thr Tyr
165 170 175

Leu Arg Tyr Lys Asn Val Tyr Tyr Val Ile Phe Ile His Ser Phe Tyr
180 185 190

Asn Ile Ile Val Ser Ser Leu Leu Leu Phe Leu Asn
195 200

<210> 307
 <211> 714
 <212> DNA
 <213> Homo sapiens

<400> 307
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 gatgaaaatc atttttattt ttggatttca agatcttttt taattatttt tataattttat 180
 ttttttaaac ttaccagttc ttatgatgat tttagagtag agttttttat tcctaaattt 240
 aaattttatt ttctttggga ttctgtttta atttttatta aaacaatatt gattgcaatg 300
 atagtcattt ttttaatagc ttttttgctt gaatatttgt tgccagaatc ggtacttggtc 360
 tattattttt aaaacaatgc tggatttaat tggaagatta gcagtaaaaa agcattttttt 420
 ttaatgactt ttacctcttt ttttacagga gcttttgaag aactttttta cagggttttt 480
 gttattacta agtttacaca aatgggattt cctgtttag ctaccgccat tcttagtagt 540
 atgttttttg cttatgggca tttatattat ggaatttttag gatttttggg tacatttata 600
 ttagggatat tttttgcttt tactttatta aggtataaaa atgtatatta tgtgattttt 660
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<210> 308
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 308
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 gagtttttta ttctaaatt taaatttatt tttctttggg attctgtttt aatttttatt 180
 aaaacaatat tgattgcaat gatagtcatt tttttaatag cttttttgct tgaatatttg 240
 ttgccagaat cgggtacttg ctattatttt caaaacaatg ctggatttaa ttggaagatt 300
 agcagtaaaa aagcattttt tttaatgact tttacctctt tttttacagg agcttttgaa 360
 gaactttttt acagggtttt tgttattact aagttttacac aaatgggatt tcctgttgta 420
 gctaccgcca ttcttagtag tatgtttttt gcttatgggc atttatatta tggaatttta 480
 ggatttttgg ttacatttat attagggata ttttttgctt ttacttattt aaggtataaa 540
 aatgtatatt atgtgatttt tatacatagt ttttataata ttattgtag cagcttggtg 600
 ctttttttga attaa 615

<210> 309
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 309
 Met Lys Lys Tyr Leu Phe Phe Ile Leu Phe Leu Ile Ser Ser Asn Asn
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 Leu Ile Val Ser Tyr Pro Leu Ser Phe Gly Gly Gly Phe Ser Tyr Gln
 20 25 30
 Phe Thr Asn Tyr Thr Asp Lys Thr Gly Ala Thr Lys Phe Ala Pro Asn
 35 40 45
 Phe Thr Arg Ala Asp His Gly Ile Asn Leu Asn Leu Phe Phe Asp Ala
 50 55 60
 Asn Tyr Val Leu Phe Glu Met Ser Tyr Lys Glu Ala Phe Val Val Thr
 65 70 75 80
 His Asn Gly Arg Tyr Phe Ser Leu Gly Leu Tyr Gly Thr Tyr Pro Met

85

90

95

Val Phe Lys Glu Gln Val Arg Met Leu Phe Pro Leu Ile Gly Phe Lys
 100 105 110

Tyr Ala Phe Asp Leu Ser Ser Asn Asn Phe Asn Leu Phe Phe Leu Ser
 115 120 125

Met Gly Leu Ala Ala Asp Leu Phe Ile Pro Asp Leu Asp Gly Leu Tyr
 130 135 140

Ile Arg Pro Leu Phe Met Leu Ser Ile Ser Pro Phe Ser Asn Tyr Lys
 145 150 155 160

Asn Phe Ser Gly Leu Thr Thr Glu Ile Met Leu Gly Phe Asn Ile Gly
 165 170 175

Trp Arg Phe Phe Asn
 180

<210> 310

<211> 164

<212> PRT

<213> Homo sapiens

<400> 310

Ile Val Ser Tyr Pro Leu Ser Phe Gly Gly Gly Phe Ser Tyr Gln Phe
 1 5 10 15

Thr Asn Tyr Thr Asp Lys Thr Gly Ala Thr Lys Phe Ala Pro Asn Phe
 20 25 30

Thr Arg Ala Asp His Gly Ile Asn Leu Asn Leu Phe Phe Asp Ala Asn
 35 40 45

Tyr Val Leu Phe Glu Met Ser Tyr Lys Glu Ala Phe Val Val Thr His
 50 55 60

Asn Gly Arg Tyr Phe Ser Leu Gly Leu Tyr Gly Thr Tyr Pro Met Val
 65 70 75 80

Phe Lys Glu Gln Val Arg Met Leu Phe Pro Leu Ile Gly Phe Lys Tyr
 85 90 95

Ala Phe Asp Leu Ser Ser Asn Asn Phe Asn Leu Phe Phe Leu Ser Met
 100 105 110

Gly Leu Ala Ala Asp Leu Phe Ile Pro Asp Leu Asp Gly Leu Tyr Ile
 115 120 125

Arg Pro Leu Phe Met Leu Ser Ile Ser Pro Phe Ser Asn Tyr Lys Asn
 130 135 140

Phe Ser Gly Leu Thr Thr Glu Ile Met Leu Gly Phe Asn Ile Gly Trp
 145 150 155 160

Arg Phe Phe Asn

<210> 311

<211> 546
 <212> DNA
 <213> Homo sapiens

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 ggcgcacta aatttgctcc aaattttacc agagcagatc atgggattaa tttgaattta 180
 ttttttgatg caaattatgt actttttgaa atgtcttaca aagaggcttt tgttggtact 240
 cacaatggga gatatttctc gcttgggctt tatggaacat atccaatggg tttcaaagag 300
 cagggttagaa tgctttttccc attaatggg tttaaatatg cttttgattt aagctctaata 360
 aacttcaatc tctttttttt aagcatgggg cttgctgctg atctttttat tcccgatctt 420
 gatggtttat atattaggcc tttgtttatg ctttctattt ctccattttc taattataaaa 480
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 aattag 546

<210> 312
 <211> 495
 <212> DNA
 <213> Homo sapiens

<400> 312
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 ttgaatttat tttttgatgc aaattatgta ctttttgaaa tgtcttaca agaggctttt 180
 gttgttactc acaatgggag atatttctcg cttgggcttt atggaacata tccaatgggt 240
 ttcaaagagc aggttagaat gcttttccca ttaattgggt ttaaatatgc ttttgattta 300
 agctctaata acttcaatct ctttttttta agcatggggc ttgctgctga tctttttatt 360
 cccgatcttg atggtttata tattaggcct ttgtttatgc tttctatttc tccattttct 420
 aattataaaa atttttctgg gtttaacaact gagattatgc ttggatttaa tatcggttg 480
 agatttttca attag 495

<210> 313
 <211> 349
 <212> PRT
 <213> Homo sapiens

<400> 313
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 20 25 30
 Gln Leu Gly Asn Leu Gln Lys Ile Lys His Glu Tyr Asn Ile Leu Gly
 35 40 45
 Ser Ser Ser Pro Arg Gly Ile Ser Leu Val Gly Glu Thr Leu Tyr Ile
 50 55 60
 Ala Ala Met His Leu Phe Lys Lys Glu Asn Gly Lys Ile Glu Lys Ile
 65 70 75 80
 Asp Leu Ser Asn Ser Tyr Glu Phe Ile Asn Asp Ile Val Asn Ile Ser
 85 90 95
 Gly Lys Thr Tyr Leu Leu Ala Gln Asn Lys Glu Glu Glu Leu Glu Val
 100 105 110
 Cys Glu Leu Asn Gly Lys Asp Trp Thr Leu Lys Phe Lys Lys Pro Leu


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ttactactag catgctcaag cgaatccata ttttcacaaat taggaaatct gcaaaaaata 120
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actctctaca ttgcagccat gcattttattt aaaaaagaaa acggcaagat tgaaaaaatt 240
gattttgagca attctttatga gttttataaac gacattgttaa atatatctgg aaaaacctat 300
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<210> 316
 <211> 978
 <212> DNA
 <213> Homo sapiens

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gcagccatgc atttatttaa aaaagaaaac ggcaagattg aaaaaattga tttgagcaat 180
tcttatgagt ttataaacga cattgtaaat atatctggaa aaacctatct tttagcgcaa 240
aacaagaag aagaattaga agtttgcgag ctaaattggaa aagattggac attaaaattt 300
aaaaaacgcg taaaagcata taaattctta aaatccgtag gaagagatgg cgtaaaagaa 360
gcatatattt tagctataga taaaaataat cgtgagaaaa tttttgatct acaaggatct 420
gacaaaacac caccacaagc tactgaaaat gacaaatttt atcaaatac aaatgaagaa 480
aacttaatta caggaaattc actcaaaata tggcaaataa ataacaatac atacacaaac 540
atagactatc aacaggccaa agaaataatg cctatcatta aaacaagcat taggggctct 600
tctgaagttt tagtaatgac tgggtggttca aataatttag atacaaaatt taaagtttac 660
tcaaatacaa ataattacac aacgccataa tttattcaag acgaagtagg cgaatttagc 720
agctactttg caagagaatt taatgatgag atattaatcg gaagtaataa tggatttgca 780
gaattttaca aaaataaaga aggaattttt gccctacggg caccctcaaa atctgtagaa 840
cctggagctt ataacggatc tcagctaagc aaaacaggcc ttaatgatat tattcctgta 900
tcaaacaaca cgattttacat attaaactcag ggcaagggtt tgtggaaatt ggaaaacaga 960
aaattaacta aagaataa 978

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<210> 317
 <211> 217
 <212> PRT
 <213> Homo sapiens

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<400> 317
Met Gln Ser Gly Leu Lys Ile Lys Leu Ile Leu Phe Phe Cys Cys Phe
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Ala Cys Ser Cys Asp Ile Asn Tyr Pro Glu Ile Lys Glu Leu Asp Tyr
  20              25              30

Lys Ile Asn Tyr Tyr Phe Thr Glu Asn Arg Leu Asp Tyr Ser Met Ser
  35              40              45

Phe Asp Phe Ala Ile Lys Val Ile Asn Ser Lys Asp Val Phe Lys Leu
  50              55              60

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Ser Ile Glu Asn Lys Asn Thr Asn Glu Phe Ile Gln Val Ile Asn Asn
 65 70 75 80
 Asn Tyr Ser Ser Phe Phe Ile Asp Ser Ser Leu Gly Lys Asp Ile Leu
 85 90 95
 Tyr Cys Lys Asp Leu Arg Phe Asn Phe Phe Asp Lys Thr Phe Glu Asp
 100 105 110
 Phe Thr Ser Cys Val Arg Leu Phe Asp Lys Gly Met Arg Val Tyr Asn
 115 120 125
 Arg Glu Leu Val Ile Ser Leu Gly Met Ser Lys Tyr Asp Leu Asp Asp
 130 135 140
 Val His Asn Tyr Val Tyr Lys Ser Lys Asp Met Glu Met Leu Asn Lys
 145 150 155 160
 Leu Ser Asn Ser Lys Val Phe Phe Val Lys Thr Tyr Lys Asp Lys Leu
 165 170 175
 His Pro Val Ser Ser Val Val Arg Ile Asp Ser Ile Asp Ile Leu Glu
 180 185 190
 Ile Asp Lys Ala Phe Asp Asn Tyr Ile Ser Phe Tyr Tyr Val Glu Lys
 195 200 205
 Asn Ser Asn Leu Phe Phe Lys Val Gly
 210 215
 <210> 318
 <211> 204
 <212> PRT
 <213> Homo sapiens
 <400> 318
 Cys Cys Phe Ala Cys Ser Cys Asp Ile Asn Tyr Pro Glu Ile Lys Glu
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 Leu Asp Tyr Lys Ile Asn Tyr Tyr Phe Thr Glu Asn Arg Leu Asp Tyr
 20 25 30
 Ser Met Ser Phe Asp Phe Ala Ile Lys Val Ile Asn Ser Lys Asp Val
 35 40 45
 Phe Lys Leu Ser Ile Glu Asn Lys Asn Thr Asn Glu Phe Ile Gln Val
 50 55 60
 Ile Asn Asn Asn Tyr Ser Ser Phe Phe Ile Asp Ser Ser Leu Gly Lys
 65 70 75 80
 Asp Ile Leu Tyr Cys Lys Asp Leu Arg Phe Asn Phe Phe Asp Lys Thr
 85 90 95
 Phe Glu Asp Phe Thr Ser Cys Val Arg Leu Phe Asp Lys Gly Met Arg
 100 105 110
 Val Tyr Asn Arg Glu Leu Val Ile Ser Leu Gly Met Ser Lys Tyr Asp
 115 120 125

Leu Asp Asp Val His Asn Tyr Val Tyr Lys Ser Lys Asp Met Glu Met
 130 135 140
 Leu Asn Lys Leu Ser Asn Ser Lys Val Phe Phe Val Lys Thr Tyr Lys
 145 150 155 160
 Asp Lys Leu His Pro Val Ser Ser Val Val Arg Ile Asp Ser Ile Asp
 165 170 175
 Ile Leu Glu Ile Asp Lys Ala Phe Asp Asn Tyr Ile Ser Phe Tyr Tyr
 180 185 190
 Val Glu Lys Asn Ser Asn Leu Phe Phe Lys Val Gly
 195 200

<210> 319
 <211> 654
 <212> DNA
 <213> Homo sapiens

<400> 319
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 gacataaatt atccggagat aaaagagctt gattataaga taaattatta ttttactgaa 120
 aatcgcttag attactctat gagttttgat tttgcaatta aagttataaa ttcaaaagat 180
 gtttttaaat tatcaataga gaataagaac actaatgagt ttattcaagt gattaataat 240
 aattatagct ctttttttat tgattctagc cttggaaaagg atattctata ttgtaaggat 300
 ttgaggttta atttttttga taaaactttt gaagatttta cctcatgtgt tcgtcttttt 360
 gataagggca tgagagtata caatagagag cttgttattt ctttgggtat gtcaaaatat 420
 gatttagatg atgttcacaa ttatgtatat aagtctaaag atatggaaat gttaaacaag 480
 ttaagcaatt ccaaagtatt ttttgttaaa acttataaag acaaactaca tccggtctct 540
 tcagttgtta gaattgattc aatagatatt ctagagattg ataaagcatt tgataattac 600
 ataagttttt attatgtcga aaaaaattca aatctttttt ttaaagttag ctga 654

<210> 320
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 320
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 aaagttataa attcaaaaaga tgttttttaa ttatcaatag agaataagaa cactaatgag 180
 tttattcaag tgattaataa taattatagc tcttttttta ttgattctag cttggaaaag 240
 gatattctat attgtaagga tttgaggttt aatttttttg ataaaacttt tgaagatttt 300
 acctcatgtg ttcgtctttt tgataagggc atgagagtat acaatagaga gcttggtatt 360
 tctttgggta tgtcaaaata tgatttagat gatgttcaca attatgtata taagtctaaa 420
 gatattgaaa tgtaaacaat gtttaagcaat tccaaagtat tttttgttaa aacttataaa 480
 gacaaactac atccggtctc ttcagttggt agaattgatt caatagatat tctagagatt 540
 gataaagcat ttgataatta cataagtttt tattatgtcg aaaaaaattc aaatcttttt 600
 tttaaagttg gctga 615

<210> 321
 <211> 1119
 <212> PRT
 <213> Homo sapiens

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 <222> (573)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (627)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (735)
 <223> Xaa equals any of the naturally occurring L-amino acids

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 Lys Leu Asn Asp Lys Asn Arg Glu Ile Met Leu Asn Glu Val Lys Asn
 35 40 45
 Ser Val Ile Asp Arg Asn Tyr Lys Lys Ala Tyr Ser Val Ala Lys Leu
 50 55 60
 Leu Gln Asp Lys Tyr Pro Gln Asn Glu Asp Ile Ala Met Leu Thr Asn
 65 70 75 80
 Thr Leu Ala Glu Ile Ala Asn Ser Ser Pro Phe Glu Ser Lys Asp Leu
 85 90 95
 Gln Arg Asp Ser Ala Asn Gln Ile Leu Asp Lys Ile Lys Gly Gln Asp
 100 105 110
 Asn Thr Lys Thr Asn Val Asn Glu Asn Phe Asp Ile Ala Phe Asn Asn
 115 120 125
 Arg Tyr Ile Lys Asp Ser Thr Ile Thr Glu Asn Tyr Ser Asp Arg Asn
 130 135 140
 Asp Asp Val Gly Ile Glu Asp Glu Asp Ile Ser Glu Phe Lys Lys Ser
 145 150 155 160
 Lys Ile Pro Glu Lys Ile Lys Pro Asn Thr Asn Pro Lys Glu Glu Asp
 165 170 175
 Gln Ile Ile Gln Ser Pro Asn Pro Lys Leu Ser Val Asn Asp Gln Lys
 180 185 190
 Asn Leu Phe Asn Leu Glu Lys Leu Lys Lys Asn Leu Ser Gly Lys Ser
 195 200 205
 Asn Ser Glu Asn Ile Leu Asn Asp Ser Gln Lys Ile Glu Asn Asp Lys
 210 215 220
 Gln Asn Thr Asn Leu Ser Lys Glu Lys Asn Ser Glu Asn Ile Leu Lys
 225 230 235 240
 Thr Pro Asp Asn Ser Lys Tyr Ser Asn Asn Asn Asn Thr Thr Ser Leu
 245 250 255

Lys Lys Ile Ser Ser Asn Ser Gln Lys Glu Ser Glu Leu Ser Pro Pro
 260 265 270
 Ser Gln Thr Ile Ile Gly Lys Ile Tyr Arg Pro Tyr Ser Tyr Leu Ile
 275 280 285
 Lys Lys Glu Leu Tyr Glu Ile Leu Asp Asp Ile Asn Thr Gly Arg Val
 290 295 300
 Thr Leu Gly Lys Asn Arg Leu Lys Glu Leu Ile Lys Lys Gly Leu Ser
 305 310 315 320
 Asn Lys Phe Gln Lys Val Asn Glu Leu Ile Glu Asn Ser Lys Asn Lys
 325 330 335
 Glu Ala Ser Asn Leu Leu Leu Thr Leu Ile Lys Lys Asp Ile Glu Pro
 340 345 350
 Asn Leu Ile Asn Ile Pro Lys Asp Pro Tyr Lys Lys Glu Ile Phe Gln
 355 360 365
 Leu Asp Lys Glu Asp Lys Lys Pro Gln Tyr Leu Glu Asp Leu Lys Ser
 370 375 380
 Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg
 385 390 395 400
 Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn
 405 410 415
 Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His
 420 425 430
 Leu Glu Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu
 435 440 445
 Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe
 450 455 460
 Leu Lys Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln
 465 470 475 480
 Ala Asn Lys Ile Gln His Leu Glu Asp Leu Lys Ser Lys Val His Ser
 485 490 495
 Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile
 500 505 510
 Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn Asp Ala Gln Ala
 515 520 525
 Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His Leu Glu Asp Leu
 530 535 540
 Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys
 545 550 555 560
 Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Xaa Lys Asn Asn
 565 570 575

Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile
 580 585 590

Gln His Leu Glu Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile
 595 600 605

Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn
 610 615 620

Glu Phe Xaa Lys Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu
 625 630 635 640

Ala Gln Ala Asn Lys Ile Gln His Leu Glu Asp Leu Lys Ser Lys Val
 645 650 655

His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln
 660 665 670

Ala Ile Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn Asp Ala
 675 680 685

Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His Leu Glu
 690 695 700

Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn
 705 710 715 720

Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Xaa Lys
 725 730 735

Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Tyr
 740 745 750

Glu Asn Asn Gly Asp Leu Leu Lys Ala Glu Asn Ala Tyr Glu Lys Ile
 755 760 765

Ile Lys Leu Thr Asn Thr Gln Glu Asp His Tyr Lys Leu Gly Ile Ile
 770 775 780

Arg Phe Lys Leu Lys Lys Tyr Glu His Ser Ile Glu Ser Phe Asp Gln
 785 790 795 800

Thr Ile Lys Leu Asp Pro Lys His Lys Lys Ala Leu His Asn Lys Gly
 805 810 815

Ile Ala Leu Met Met Leu Asn Lys Asn Lys Lys Ala Ile Glu Ser Phe
 820 825 830

Glu Lys Ala Ile Gln Ile Asp Lys Asn Tyr Gly Thr Ala Tyr Tyr Gln
 835 840 845

Lys Gly Ile Ala Glu Glu Lys Asn Gly Asp Met Gln Gln Ala Phe Ala
 850 855 860

Ser Phe Lys Asn Ala Tyr Asn Leu Asp Lys Asn Pro Asn Tyr Ala Leu
 865 870 875 880

Lys Ala Gly Ile Val Ser Asn Asn Leu Gly Asn Phe Lys Gln Ser Glu
 885 890 895

Glu Tyr Leu Asn Phe Phe Asn Ala Asn Ala Lys Lys Pro Asn Glu Ile
 900 905 910

Ala Ile Tyr Asn Leu Ser Ile Ala Lys Phe Glu Asn Asn Lys Leu Glu
 915 920 925

Glu Ser Leu Glu Thr Ile Asn Lys Ala Ile Asp Leu Asn Pro Glu Lys
 930 935 940

Ser Glu Tyr Leu Tyr Leu Lys Ala Ser Ile Asn Leu Lys Lys Glu Asn
 945 950 955 960

Tyr Gln Asn Ala Ile Ser Leu Tyr Ser Leu Val Ile Glu Lys Asn Pro
 965 970 975

Glu Asn Thr Ser Ala Tyr Ile Asn Leu Ala Lys Ala Tyr Glu Lys Ser
 980 985 990

Gly Asn Lys Ser Gln Ala Ile Ser Thr Leu Glu Lys Ile Ile Asn Lys
 995 1000 1005

Asn Asn Lys Leu Ala Leu Asn Asn Leu Gly Ile Leu Tyr Lys Lys Glu
 1010 1015 1020

Lys Asn Tyr Gln Lys Ala Ile Glu Ile Phe Glu Lys Ala Ile Ile Asn
 1025 1030 1035 1040

Ser Asp Ile Glu Ala Lys Tyr Asn Leu Ala Thr Thr Leu Ile Glu Ile
 1045 1050 1055

Asn Asp Asn Thr Arg Ala Lys Asp Leu Leu Arg Glu Tyr Thr Lys Leu
 1060 1065 1070

Lys Pro Asn Asn Pro Glu Ala Leu His Ala Leu Gly Ile Ile Glu Tyr
 1075 1080 1085

Asn Glu Asn Asn Asn Asp Gln Thr Leu Arg Glu Leu Ile Lys Lys Phe
 1090 1095 1100

Pro Asn Tyr Lys Lys Asn Glu Asn Ile Lys Lys Ile Ile Gly Ile
 1105 1110 1115

<210> 322
 <211> 1087
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (541)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (595)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (703)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 322

Lys Leu Asn Asp Lys Asn Arg Glu Ile Met Leu Asn Glu Val Lys Asn
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Ser Val Ile Asp Arg Asn Tyr Lys Lys Ala Tyr Ser Val Ala Lys Leu
20 25 30

Leu Gln Asp Lys Tyr Pro Gln Asn Glu Asp Ile Ala Met Leu Thr Asn
35 40 45

Thr Leu Ala Glu Ile Ala Asn Ser Ser Pro Phe Glu Ser Lys Asp Leu
50 55 60

Gln Arg Asp Ser Ala Asn Gln Ile Leu Asp Lys Ile Lys Gly Gln Asp
65 70 75 80

Asn Thr Lys Thr Asn Val Asn Glu Asn Phe Asp Ile Ala Phe Asn Asn
85 90 95

Arg Tyr Ile Lys Asp Ser Thr Ile Thr Glu Asn Tyr Ser Asp Arg Asn
100 105 110

Asp Asp Val Gly Ile Glu Asp Glu Asp Ile Ser Glu Phe Lys Lys Ser
115 120 125

Lys Ile Pro Glu Lys Ile Lys Pro Asn Thr Asn Pro Lys Glu Glu Asp
130 135 140

Gln Ile Ile Gln Ser Pro Asn Pro Lys Leu Ser Val Asn Asp Gln Lys
145 150 155 160

Asn Leu Phe Asn Leu Glu Lys Leu Lys Lys Asn Leu Ser Gly Lys Ser
165 170 175

Asn Ser Glu Asn Ile Leu Asn Asp Ser Gln Lys Ile Glu Asn Asp Lys
180 185 190

Gln Asn Thr Asn Leu Ser Lys Glu Lys Asn Ser Glu Asn Ile Leu Lys
195 200 205

Thr Pro Asp Asn Ser Lys Tyr Ser Asn Asn Asn Asn Thr Thr Ser Leu
210 215 220

Lys Lys Ile Ser Ser Asn Ser Gln Lys Glu Ser Glu Leu Ser Pro Pro
225 230 235 240

Ser Gln Thr Ile Ile Gly Lys Ile Tyr Arg Pro Tyr Ser Tyr Leu Ile
245 250 255

Lys Lys Glu Leu Tyr Glu Ile Leu Asp Asp Ile Asn Thr Gly Arg Val
260 265 270

Thr Leu Gly Lys Asn Arg Leu Lys Glu Leu Ile Lys Lys Gly Leu Ser
275 280 285

Asn Lys Phe Gln Lys Val Asn Glu Leu Ile Glu Asn Ser Lys Asn Lys
290 295 300

Glu Ala Ser Asn Leu Leu Leu Thr Leu Ile Lys Lys Asp Ile Glu Pro
 305 310 315 320
 Asn Leu Ile Asn Ile Pro Lys Asp Pro Tyr Lys Lys Glu Ile Phe Gln
 325 330 335
 Leu Asp Lys Glu Asp Lys Lys Pro Gln Tyr Leu Glu Asp Leu Lys Ser
 340 345 350
 Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg
 355 360 365
 Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn
 370 375 380
 Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His
 385 390 395 400
 Leu Glu Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu
 405 410 415
 Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe
 420 425 430
 Leu Lys Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln
 435 440 445
 Ala Asn Lys Ile Gln His Leu Glu Asp Leu Lys Ser Lys Val His Ser
 450 455 460
 Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile
 465 470 475 480
 Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn Asp Ala Gln Ala
 485 490 495
 Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His Leu Glu Asp Leu
 500 505 510
 Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys
 515 520 525
 Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Xaa Lys Asn Asn
 530 535 540
 Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile
 545 550 555 560
 Gln His Leu Glu Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile
 565 570 575
 Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn
 580 585 590
 Glu Phe Xaa Lys Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu
 595 600 605
 Ala Gln Ala Asn Lys Ile Gln His Leu Glu Asp Leu Lys Ser Lys Val
 610 615 620

His Ser Ile Lys Pro Ile Asp Leu Glu Asn Thr Lys Ser Arg Gln Gln
 625 630 635 640
 Ala Ile Lys Asp Leu Asn Glu Phe Leu Lys Asn Asn Pro Asn Asp Ala
 645 650 655
 Gln Ala Ser Lys Thr Leu Ala Gln Ala Asn Lys Ile Gln His Leu Glu
 660 665 670
 Asp Leu Lys Ser Lys Val His Ser Ile Lys Pro Ile Asp Leu Glu Asn
 675 680 685
 Thr Lys Ser Arg Gln Gln Ala Ile Lys Asp Leu Asn Glu Phe Xaa Lys
 690 695 700
 Asn Asn Pro Asn Asp Ala Gln Ala Ser Lys Thr Leu Ala Gln Ala Tyr
 705 710 715 720
 Glu Asn Asn Gly Asp Leu Leu Lys Ala Glu Asn Ala Tyr Glu Lys Ile
 725 730 735
 Ile Lys Leu Thr Asn Thr Gln Glu Asp His Tyr Lys Leu Gly Ile Ile
 740 745 750
 Arg Phe Lys Leu Lys Lys Tyr Glu His Ser Ile Glu Ser Phe Asp Gln
 755 760 765
 Thr Ile Lys Leu Asp Pro Lys His Lys Lys Ala Leu His Asn Lys Gly
 770 775 780
 Ile Ala Leu Met Met Leu Asn Lys Asn Lys Lys Ala Ile Glu Ser Phe
 785 790 795 800
 Glu Lys Ala Ile Gln Ile Asp Lys Asn Tyr Gly Thr Ala Tyr Tyr Gln
 805 810 815
 Lys Gly Ile Ala Glu Glu Lys Asn Gly Asp Met Gln Gln Ala Phe Ala
 820 825 830
 Ser Phe Lys Asn Ala Tyr Asn Leu Asp Lys Asn Pro Asn Tyr Ala Leu
 835 840 845
 Lys Ala Gly Ile Val Ser Asn Asn Leu Gly Asn Phe Lys Gln Ser Glu
 850 855 860
 Glu Tyr Leu Asn Phe Phe Asn Ala Asn Ala Lys Lys Pro Asn Glu Ile
 865 870 875 880
 Ala Ile Tyr Asn Leu Ser Ile Ala Lys Phe Glu Asn Asn Lys Leu Glu
 885 890 895
 Glu Ser Leu Glu Thr Ile Asn Lys Ala Ile Asp Leu Asn Pro Glu Lys
 900 905 910
 Ser Glu Tyr Leu Tyr Leu Lys Ala Ser Ile Asn Leu Lys Lys Glu Asn
 915 920 925
 Tyr Gln Asn Ala Ile Ser Leu Tyr Ser Leu Val Ile Glu Lys Asn Pro
 930 935 940

Glu Asn Thr Ser Ala Tyr Ile Asn Leu Ala Lys Ala Tyr Glu Lys Ser
 945 950 955 960
 Gly Asn Lys Ser Gln Ala Ile Ser Thr Leu Glu Lys Ile Ile Asn Lys
 965 970 975
 Asn Asn Lys Leu Ala Leu Asn Asn Leu Gly Ile Leu Tyr Lys Lys Glu
 980 985 990
 Lys Asn Tyr Gln Lys Ala Ile Glu Ile Phe Glu Lys Ala Ile Ile Asn
 995 1000 1005
 Ser Asp Ile Glu Ala Lys Tyr Asn Leu Ala Thr Thr Leu Ile Glu Ile
 1010 1015 1020
 Asn Asp Asn Thr Arg Ala Lys Asp Leu Leu Arg Glu Tyr Thr Lys Leu
 1025 1030 1035 1040
 Lys Pro Asn Asn Pro Glu Ala Leu His Ala Leu Gly Ile Ile Glu Tyr
 1045 1050 1055
 Asn Glu Asn Asn Asn Asp Gln Thr Leu Arg Glu Leu Ile Lys Lys Phe
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 Pro Asn Tyr Lys Lys Asn Glu Asn Ile Lys Lys Ile Ile Gly Ile
 1075 1080 1085

<210> 323
 <211> 3354
 <212> DNA
 <213> Homo sapiens

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 ataatgctaa acgaagttaa aaatagcgta atagatcgaa actataaaaa agcatattct 180
 gttgcaaaac ttctgcaaga caaatacccc caaatgaag acattgcaat gcttacaaat 240
 aactagcag aaattgccaa cagtagtcct tttgaatcaa aagacttgca aagagattct 300
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 aattttgata tagcatttaa taatagatac attaaagaca gcacaataac agaaaactac 420
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 gatcttgaaa acacaaaatc acgccaacaa gccattaagg atctaaacga attcttaaaa 1560
 aacaatccca atgacgcccc ggcctctaaa acttttagctc aagctaataa aatacaacac 1620

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gttcattcaa	taaaacccat	tgatcttgaa	aacacaaaat	cacgccaca	agccattaag	1860
gatctaaacg	aattctttaa	aacaatccca	atgacgccag	gcctctaaaa	cttttagctca	1920
agctaataaa	atacaacacc	tagaggacct	taaatctaag	gttcattcaa	taaaacccat	1980
tgatcttgaa	aacacaaaaat	cacgccaca	agccattaag	gatctaaacg	aattctttaa	2040
aaacaatccc	aatgacgccc	aggcctctaa	aacttttagct	caagctaata	aaatcacaca	2100
cctggaggac	cttaaattcta	aggttcattc	aataaaaccc	attgatcttg	aaaacacaaa	2160
atcacgccaa	caagccatta	aggatctaaa	cgaattctta	aaaacaatcc	caatgacgcc	2220
caggcctcta	aaacttttagc	tcaagcttat	gaaaacaatg	gagatttgct	aaaagcagaa	2280
aatgcatacg	aaaaaattat	caaactcaca	aatacccaag	aagatcacta	taaacttgga	2340
atcattagat	tcaagcttaa	aaagtatgaa	cactcaatag	aatcatttga	tcaaacata	2400
aaactcgacc	caaacataa	aaaagcactt	cataacaaag	gaatagcttt	aatgatgcta	2460
aataaaaaaca	aaaaagcaat	agaatctttt	gagaaagcaa	tacaaattga	taaaaattat	2520
ggcaccgcct	actacaaaaa	aggaatagca	gaagaaaaaa	atggcgatat	gcaacaagca	2580
tttgcaagct	ttaaaaaatgc	ctacaatctc	gacaaaaacc	ccaattatgc	attaaaagca	2640
ggaatagtat	caaataactt	gggcaacttc	aaacaaagt	aaaggtatatt	aaattttttt	2700
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<211> 3258

<212> DNA

<213> Homo sapiens

<400> 324

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<210> 325
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 <212> PRT
 <213> Homo sapiens

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Phe Leu Ile Leu Ile Leu Asn Ser Lys Leu Ala Tyr Ser Gln Arg Leu
      20             25             30

Ile Arg Ile Gly Lys Glu Glu Met Lys Asn Lys Asn Tyr Ile Gln Ala
      35             40             45

Ile Glu Thr Leu Ser Asp Ala Ile Lys Lys Tyr Pro Lys Val Gln Leu
      50             55             60

Gly Tyr Tyr Phe Leu Ser Ile Ala Tyr Arg Glu Asn Asn Gln Leu Thr
      65             70             75             80

Glu Ala Glu Gly Ala Leu Leu Asp Gly Ile Ala Val Gly Gly Glu Ile
      85             90             95

Asp Tyr Ile Leu Tyr Tyr Glu Leu Gly Asn Ile Met Phe Asn Arg Gly
      100            105            110

Glu Gly Tyr Tyr Pro Leu Ala Ile Lys Tyr Tyr Ser Asn Ser Ile Lys

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115	120	125
Ser Arg Pro Asn Tyr Asp	Ser Ala Leu Leu Asn	Arg Ala Asn Ala Tyr
130	135	140
Val Gln Gln Gly Lys Ile Thr Ser Lys Glu Lys Glu Tyr Gln Lys Ala		
145	150	155 160
Trp Asp Ser Tyr Thr Met Ala Ile His Asp Tyr Ser Gln Phe Ile Thr		
	165	170 175
Leu Arg Ser Lys Thr Glu Lys Lys Asp Ser Ile Leu Leu Ile Ile Ser		
	180	185 190
Tyr Leu Arg Asn Glu Lys Ile Asn Leu Glu Gln Leu Asp Lys Ser Leu		
	195	200 205
Lys Gly Arg Thr Glu His Ile Val Tyr Ala Lys Glu Asp Lys Asn Gln		
	210	215 220
Ile Leu Lys Asp Ser Phe Lys Asp Asn Leu Glu Thr Asn Ser Leu Ile		
225	230	235 240
Glu Leu Glu Lys Leu Asn Trp Gln Glu Glu Leu Tyr Ile Asp Glu		
	245	250 255
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Pro Lys Val Gln Leu Gly Tyr Tyr Phe Leu Ser Ile Ala Tyr Arg Glu		
	35	40 45
Asn Asn Gln Leu Thr Glu Ala Glu Gly Ala Leu Leu Asp Gly Ile Ala		
	50	55 60
Val Gly Gly Glu Ile Asp Tyr Ile Leu Tyr Tyr Glu Leu Gly Asn Ile		
65	70	75 80
Met Phe Asn Arg Gly Glu Gly Tyr Tyr Pro Leu Ala Ile Lys Tyr Tyr		
	85	90 95
Ser Asn Ser Ile Lys Ser Arg Pro Asn Tyr Asp Ser Ala Leu Leu Asn		
	100	105 110
Arg Ala Asn Ala Tyr Val Gln Gln Gly Lys Ile Thr Ser Lys Glu Lys		
	115	120 125
Glu Tyr Gln Lys Ala Trp Asp Ser Tyr Thr Met Ala Ile His Asp Tyr		
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Ser Gln Phe Ile Thr Leu Arg Ser Lys Thr Glu Lys Lys Asp Ser Ile		

<400> 329

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20 25 30
Tyr Ile Leu Lys Glu Asn Glu Ile Ser Ile Thr Thr Arg Leu Gly Lys
35 40 45
Ile Gln Arg Thr Glu Asn Leu Ala Gly Leu Lys Tyr Lys Ile Pro Leu
50 55 60
Ile Glu Asn Val Gln Ile Phe Pro Lys Ile Ile Leu Arg Trp Asp Gly
65 70 75 80
Glu Pro Gln Arg Ile Pro Thr Gly Gly Glu Glu Lys Gln Leu Ile Trp
85 90 95
Ile Asp Thr Thr Ala Arg Trp Lys Ile Ala Asp Ile Asn Lys Phe Tyr
100 105 110
Thr Thr Ile Lys Thr Met Ser Arg Ala Tyr Val Arg Ile Asp Ala Ala
115 120 125
Ile Glu Pro Ala Val Arg Gly Val Ile Ala Lys Tyr Pro Leu Leu Glu
130 135 140
Ile Ile Arg Ser Ser Asn Asp Pro Ile Gln Arg Leu Ser Asn Gly Ile
145 150 155 160
Leu Thr Pro Gln Glu Thr Lys Ile Asn Gly Ile Tyr Lys Ile Thr Lys
165 170 175
Gly Arg Lys Ile Ile Glu Lys Glu Ile Ile Arg Ile Ala Asn Asn Asn
180 185 190
Thr Lys Asp Ile Gly Ile Glu Ile Val Asp Val Leu Ile Arg Lys Val
195 200 205
Thr Tyr Asp Pro Ser Leu Ile Glu Ser Val Asn Asn Arg Met Ile Ser
210 215 220
Glu Arg Gln Gln Ile Ala Glu Glu Gln Arg Ser Ile Gly Leu Ala Glu
225 230 235 240
Lys Thr Glu Ile Leu Gly Ser Ile Glu Lys Glu Lys Leu Lys Ile Leu
245 250 255
Ser Glu Ala Lys Ala Thr Ala Ala Lys Ile Lys Ala Glu Gly Asp Arg
260 265 270
Glu Ala Ala Lys Ile Tyr Ser Asn Ala Tyr Gly Lys Asn Ile Glu Phe
275 280 285
Tyr Lys Phe Trp Gln Ala Leu Glu Ser Tyr Lys Ala Val Leu Lys Asp
290 295 300
Lys Arg Lys Ile Phe Ser Thr Asp Met Asp Phe Phe Gln Tyr Leu His
246

305

310

315

320

Lys Arg Asn

<210> 330

<211> 296

<212> PRT

<213> Homo sapiens

<400> 330

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 20 25 30

Tyr Lys Ile Pro Leu Ile Glu Asn Val Gln Ile Phe Pro Lys Ile Ile
 35 40 45

Leu Arg Trp Asp Gly Glu Pro Gln Arg Ile Pro Thr Gly Gly Glu Glu
 50 55 60

Lys Gln Leu Ile Trp Ile Asp Thr Thr Ala Arg Trp Lys Ile Ala Asp
 65 70 75 80

Ile Asn Lys Phe Tyr Thr Thr Ile Lys Thr Met Ser Arg Ala Tyr Val
 85 90 95

Arg Ile Asp Ala Ala Ile Glu Pro Ala Val Arg Gly Val Ile Ala Lys
 100 105 110

Tyr Pro Leu Leu Glu Ile Ile Arg Ser Ser Asn Asp Pro Ile Gln Arg
 115 120 125

Leu Ser Asn Gly Ile Leu Thr Pro Gln Glu Thr Lys Ile Asn Gly Ile
 130 135 140

Tyr Lys Ile Thr Lys Gly Arg Lys Ile Ile Glu Lys Glu Ile Ile Arg
 145 150 155 160

Ile Ala Asn Asn Asn Thr Lys Asp Ile Gly Ile Glu Ile Val Asp Val
 165 170 175

Leu Ile Arg Lys Val Thr Tyr Asp Pro Ser Leu Ile Glu Ser Val Asn
 180 185 190

Asn Arg Met Ile Ser Glu Arg Gln Gln Ile Ala Glu Glu Gln Arg Ser
 195 200 205

Ile Gly Leu Ala Glu Lys Thr Glu Ile Leu Gly Ser Ile Glu Lys Glu
 210 215 220

Lys Leu Lys Ile Leu Ser Glu Ala Lys Ala Thr Ala Ala Lys Ile Lys
 225 230 235 240

Ala Glu Gly Asp Arg Glu Ala Ala Lys Ile Tyr Ser Asn Ala Tyr Gly
 245 250 255

Lys Asn Ile Glu Phe Tyr Lys Phe Trp Gln Ala Leu Glu Ser Tyr Lys

260	265	270
Ala Val Leu Lys Asp Lys Arg Lys Ile Phe Ser Thr Asp Met Asp Phe		
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Phe Gln Tyr Leu His Lys Arg Asn

290 295

<210> 331

<211> 972

<212> DNA

<213> Homo sapiens

<400> 331

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gaacctcaaa	gaatcccaac	aggaggggaa	gaaaagcaat	taatatggat	tgatacaact	300
gctagatgga	aaattgcaga	cataaataaa	ttttacacaa	caataaaaac	aatgagtaga	360
gcttacgtta	gaattgatgc	agcaattgaa	cctgctgtta	gggggggttat	tgcaaaatac	420
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ctcacccccac	aagaaacaaa	aattaacggt	atttataaaa	taacaaaagg	acgaaagata	540
atcgaaaaaag	aaataattcg	tatagcaaac	aacaatacca	aagatattgg	aattgaaatt	600
gtagacgtac	taataagaaa	agttacttat	gacccaagcc	ttattgaatc	tgtaaacaac	660
agaatgatct	cagaaagaca	acaaatcgca	gaagaacaaa	gaagcatagg	attagctgaa	720
aaaacagaaa	ttcttggaag	catagaaaaa	gaaaaactga	aaatattaag	tgaagcaaaa	780
gccactgctg	caaaaataaa	agccgaaggg	gatagagaag	ccgcaaaaat	ttattcaaat	840
gcatatggca	aaaatattga	atttttacaaa	ttctggcagg	cattagaaaag	ctataaagca	900
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<211> 891

<212> DNA

<213> Homo sapiens

<400> 332

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gcaattgaac	ctgctgttag	gggggttatt	gcaaaatacc	ctttgcttga	aattataaga	360
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attaacggta	tttataaaat	aacaaaagga	cgaaagataa	tcgaaaaaga	aataattcgt	480
atagcaaaaca	acaataccaa	agatattgga	attgaaattg	tagacgtact	aataagaaaa	540
gttacttatg	acccaagcct	tattgaatct	gtaaacaaca	gaatgatctc	agaaagacaa	600
caaatcgag	aagaacaaag	aagcatagga	ttagctgaaa	aaacagaaat	tcttggaagc	660
atagaaaaaag	aaaaactgaa	aatattaagt	gaagcaaaaag	ccactgctgc	aaaaataaaa	720
gccgaagggg	atagagaagc	cgcaaaaatt	tattcaaatg	catatggcaa	aaatattgaa	780
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<210> 333

<211> 246

<212> PRT

<213> Homo sapiens

<400> 333

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 Ala Ile Ile Phe Ser Asp Ala Thr Glu Tyr Phe Phe Glu Ile Gln Thr
 35 40 45
 Thr Pro Phe Ile Lys Asn Glu Ile Leu Phe Ile Asn Asp Lys Asn Leu
 50 55 60
 Glu Ile Ile Lys Asp Lys Leu Lys Thr Thr Lys Lys Ile Leu Leu Thr
 65 70 75 80
 His Lys Ser Asn Asn Glu Ile Leu Asn Asn Glu Ile Leu Lys Glu Lys
 85 90 95
 Ile Phe Tyr Leu Ser Lys Ile Lys Phe Ser Leu Lys Lys Ser Ile Asp
 100 105 110
 Phe Leu Leu Asn Glu Lys Ser Ile Asp Leu Gln Lys Thr Leu Leu Phe
 115 120 125
 Arg Asp Lys Ser Leu Asn Asn Glu Asp Leu Glu Tyr Leu Glu Lys Lys
 130 135 140
 Gly Lys Glu Lys Asn Val Asn Ile Thr Leu Ile Asn Glu Lys Asn Ile
 145 150 155 160
 Ser Tyr Ile Gln Thr Phe Ile Thr Ser Gln Ile Lys Thr Ile Ile Leu
 165 170 175
 Phe Ser Leu Arg Asp Asn Asn Ile Ile Leu Lys Lys Ile Leu Asn Ser
 180 185 190
 Pro Phe Ser Lys Asn Ile Lys Phe Val Leu Ile Gly Asn Thr Arg Lys
 195 200 205
 Asp Leu Lys Ile Ile Lys Leu Lys Tyr Ile Ile Thr Leu Lys Glu Pro
 210 215 220
 Asp Leu Ile Lys Ile Ala Lys Asp Val Glu Lys Asp Phe Gln Tyr Glu
 225 230 235 240
 Phe Asn Ile Tyr Lys Gln
 245

<210> 334
 <211> 220
 <212> PRT
 <213> Homo sapiens

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 Phe Phe Glu Ile Gln Thr Thr Pro Phe Ile Lys Asn Glu Ile Leu Phe
 20 25 30

Ile Asn Asp Lys Asn Leu Glu Ile Ile Lys Asp Lys Leu Lys Thr Thr
 35 40 45
 Lys Lys Ile Leu Leu Thr His Lys Ser Asn Asn Glu Ile Leu Asn Asn
 50 55 60
 Glu Ile Leu Lys Glu Lys Ile Phe Tyr Leu Ser Lys Ile Lys Phe Ser
 65 70 75 80
 Leu Lys Lys Ser Ile Asp Phe Leu Leu Asn Glu Lys Ser Ile Asp Leu
 85 90 95
 Gln Lys Thr Leu Leu Phe Arg Asp Lys Ser Leu Asn Asn Glu Asp Leu
 100 105 110
 Glu Tyr Leu Glu Lys Lys Gly Lys Glu Lys Asn Val Asn Ile Thr Leu
 115 120 125
 Ile Asn Glu Lys Asn Ile Ser Tyr Ile Gln Thr Phe Ile Thr Ser Gln
 130 135 140
 Ile Lys Thr Ile Ile Leu Phe Ser Leu Arg Asp Asn Asn Ile Ile Leu
 145 150 155 160
 Lys Lys Ile Leu Asn Ser Pro Phe Ser Lys Asn Ile Lys Phe Val Leu
 165 170 175
 Ile Gly Asn Thr Arg Lys Asp Leu Lys Ile Ile Lys Leu Lys Tyr Ile
 180 185 190
 Ile Thr Leu Lys Glu Pro Asp Leu Ile Lys Ile Ala Lys Asp Val Glu
 195 200 205
 Lys Asp Phe Gln Tyr Glu Phe Asn Ile Tyr Lys Gln
 210 215 220

<210> 335
 <211> 741
 <212> DNA
 <213> Homo sapiens

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 gaatattttt ttgaaattca aacaactcca ttcataaaaa acgaaatact atttataaat 180
 gacaaaaatt tagaaattat aaaagacaag cttaaaacaa caaaaaaaat actattaact 240
 cataaatcaa ataatgaaat tctaaataac gaaattctaa aagagaaaaat tttttatcta 300
 tcaaaaaataa aatttttctt aaaaaaatct attgactttc tgcttaacga aaaatcaata 360
 gatttgcaaa aaacattact atttagagac aaatctctaa ataacgaaga cttgaatac 420
 ttggaaaaaa aaggcaaaga aaaaaatgtc aatattactc taataaacga aaaaaacata 480
 tcctatatctc aaacattcat tacttctcaa ataaaaacaa taatattatt ctctttaaga 540
 gataataata ttatttttaa aaagatacta aattcgcttt tttctaaaaa tataaaattt 600
 gtattaattg gcaatacaag aaaagactta aaaattatta agctaaaata tataatcacc 660
 cttaaagagc ctgatttgat aaaaatagca aaagatgttg aaaaagattt tcaatatgaa 720
 ttttaacattt ataaacaata a 741

<210> 336
 <211> 663
 <212> DNA
 <213> Homo sapiens

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ataaaaagaca agcttaaaac aacaaaaaaa atactattaa ctcataaatc aaataatgaa 180
attctaaata acgaaattct aaaagagaaa attttttatc tatcaaaaat aaaattttct 240
ctaaaaaaat ctattgactt tctgcttaac gaaaaatcaa tagatttgca aaaaacatta 300
ctatttagag acaaatctct aaataacgaa gaccttgaat acttggaata aaaaggcaaa 360
gaaaaaaatg tcaatattac tctaataaac gaaaaaaaca tctctatat tcaaacattc 420
attacttctc aaataaaaaac aataatatta ttctctttaa gagataataa tattatttta 480
aaaaagatac taaattcgcc tttttctaaa aatataaaat ttgtattaat tggcaatata 540
agaaaagact taaaaattat taagctaaaa tatataatca cccttaaaga gcctgatttg 600
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taa 663

<210> 337
<211> 127
<212> PRT
<213> Homo sapiens

<400> 337
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20 25 30
Lys Gly Leu Ala Leu Asn Leu Gly Ile Ser Tyr Phe Thr Ser Pro Thr
35 40 45
Tyr Asn Ile Val Asn Val Tyr Asp Phe Ile Asn Phe Lys Phe Tyr His
50 55 60
Ile Asp Leu Tyr Arg Val Ser Ser Leu Glu Glu Phe Glu Leu Val Gly
65 70 75 80
Gly Leu Glu Ile Leu Met Asp Leu Asp Ser Ile Ile Ala Ile Glu Trp
85 90 95
Pro Gln Ile Ala Leu Ser Ile Val Pro Lys Asp Arg Leu Phe Ser Leu
100 105 110
Thr Phe Lys Ile Val Gly Ser Gly Arg Val Val Glu Leu Asn Gly
115 120 125

<210> 338
<211> 100
<212> PRT
<213> Homo sapiens

<400> 338
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20 25 30
Phe Lys Phe Tyr His Ile Asp Leu Tyr Arg Val Ser Ser Leu Glu Glu
35 40 45

Phe Glu Leu Val Gly Gly Leu Glu Ile Leu Met Asp Leu Asp Ser Ile
 50 55 60
 Ile Ala Ile Glu Trp Pro Gln Ile Ala Leu Ser Ile Val Pro Lys Asp
 65 70 75 80
 Arg Leu Phe Ser Leu Thr Phe Lys Ile Val Gly Ser Gly Arg Val Val
 85 90 95
 Glu Leu Asn Gly
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<210> 339
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 339
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 <213> Homo sapiens

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 Gly His Tyr Asn Ser Ser Ser Asn Thr Asn Ile Gln Ile Ser Ser Glu
 50 55 60
 Ile Lys Asp Ile Lys Glu Asn Phe Ala Ser Ile Lys Ala Phe Phe Arg
 65 70 75 80

Ile Leu Lys Arg Glu Asn Ile Asn Glu Pro Tyr Leu Leu Asn Glu Glu
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 Phe Glu Glu Ile Phe Ser Val Asn Lys Gln Gly Glu Tyr Thr Ile Gly
 100 105 110
 Ala Asn Gln Lys Arg Pro Ser Val Arg Gly Ile Pro Arg Phe Pro Lys
 115 120 125
 Thr Pro Ile Lys Ile Asn Glu Lys Trp Ser Tyr Leu Ala Glu Glu Tyr
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 Ile Glu Ala Ser Lys Ile Asp Lys Ser Ile Lys Asp Phe Val Val Lys
 145 150 155 160
 Phe Asn Val Asn Tyr Glu Tyr Lys Gly Lys Glu Glu His Asn Gly Lys
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 His Tyr His Ile Ile Leu Ser Asn Tyr Glu Ser Gln Tyr Asn Val Lys
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 Asn Ile Ser Phe Tyr Gln Lys Val Asp Gln Lys Ile Tyr Phe Asp Asn
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 Asn Gln Asn Asn Asn Gln His Phe Lys Met Ile Gly Asn Ser Leu Gly
 225 230 235 240
 Arg Ile Val Ser Ile Glu Leu Pro Asn Asp Asn Leu Ile Glu Thr Glu
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 Val Glu Asn Tyr Ile Arg Glu Lys Lys Ile Lys Ala Ile Glu Val Glu
 260 265 270
 Lys Asn Asn Lys Gly Ile Asn Leu Ser Phe Asp Ile Glu Phe Tyr Pro
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 Asn Ser Phe Gln Ile Leu Gln Lys Glu Tyr Lys Lys Ile Asp Leu Ile
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 Ala Lys Leu Leu Glu Lys Phe Lys Lys Asn Asn Ile Leu Ile Glu Gly
 305 310 315 320
 His Thr Glu Gln Phe Gly Leu Glu Glu Glu Met His Glu Leu Ser Glu
 325 330 335
 Lys Arg Ala Arg Ala Ile Gly Asn Tyr Leu Ile Lys Met Lys Val Lys
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 Asp Lys Asp Gln Ile Leu Phe Lys Gly Trp Gly Ser Gln Lys Pro Lys
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 <212> PRT
 <213> Homo sapiens

<400> 342

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Ser Ser Asn Thr Asn Ile Gln Ile Ser Ser Glu Ile Lys Asp Ile Lys
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Glu Asn Phe Ala Ser Ile Lys Ala Phe Phe Arg Ile Leu Lys Arg Glu
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Asn Ile Asn Glu Pro Tyr Leu Leu Asn Glu Glu Phe Glu Glu Ile Phe
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Ser Val Asn Lys Gln Gly Glu Tyr Thr Ile Gly Ala Asn Gln Lys Arg
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Pro Ser Val Arg Gly Ile Pro Arg Phe Pro Lys Thr Pro Ile Lys Ile
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Asn Glu Lys Trp Ser Tyr Leu Ala Glu Glu Tyr Ile Glu Ala Ser Lys
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Ile Asp Lys Ser Ile Lys Asp Phe Val Val Lys Phe Asn Val Asn Tyr
      130            135            140

Glu Tyr Lys Gly Lys Glu Glu His Asn Gly Lys His Tyr His Ile Ile
      145            150            155            160

Leu Ser Asn Tyr Glu Ser Gln Tyr Asn Val Lys Asn Ile Ser Phe Tyr
      165            170            175

Gln Lys Val Asp Gln Lys Ile Tyr Phe Asp Asn Glu Ile Gly Asn Thr
      180            185            190

Tyr Lys Tyr Ser Asp Lys Tyr Ile Phe Glu Ile Asn Gln Asn Asn Asn
      195            200            205

Gln His Phe Lys Met Ile Gly Asn Ser Leu Gly Arg Ile Val Ser Ile
      210            215            220

Glu Leu Pro Asn Asp Asn Leu Ile Glu Thr Glu Val Glu Asn Tyr Ile
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Arg Glu Lys Lys Ile Lys Ala Ile Glu Val Glu Lys Asn Asn Lys Gly
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Ile Asn Leu Ser Phe Asp Ile Glu Phe Tyr Pro Asn Ser Phe Gln Ile
      260            265            270

Leu Gln Lys Glu Tyr Lys Lys Ile Asp Leu Ile Ala Lys Leu Leu Glu
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Lys Phe Lys Lys Asn Asn Ile Leu Ile Glu Gly His Thr Glu Gln Phe
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Gly Leu Glu Glu Glu Met His Glu Leu Ser Glu Lys Arg Ala Arg Ala
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Ile Gly Asn Tyr Leu Ile Lys Met Lys Val Lys Asp Lys Asp Gln Ile
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<211> 1170

<212> DNA

<213> Homo sapiens

<400> 343

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<212> DNA

<213> Homo sapiens

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ggtattccaa	gattcccaaa	aacaccaatc	aaaataaatg	aaaaatggtc	atatcttgca	360
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caaaaaattt	attttgataa	tgaatttggc	aatacatata	aatacagcga	taaatatata	600
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<210> 345

<211> 612

<212> PRT

<213> Homo sapiens

<400> 345

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Tyr Ser Leu Phe Phe Val His Lys Gly Phe Leu Ser Lys Asn Val Asn
 35 40 45

Gly Lys Ile Thr Lys Val Gln Val Asn Gly Ile Asn Ser Arg Trp Val
 50 55 60

Tyr Pro Phe Tyr Lys Leu Val Pro Ser Arg Ile Thr Ser Ile Tyr Glu
 65 70 75 80

Asp Val Tyr Ser Ser Ser Ser Phe Leu Thr Thr Ser Asn Asn Leu Tyr
 85 90 95

Val Ser Tyr Asp Tyr Ser Lys Asn Phe Arg Lys Leu Val Gly Ile Asp
 100 105 110

Lys Phe Asn Ser Gly Ala Tyr Ile Thr Ser Ser Ala Phe Ser Gln Gly
 115 120 125

Asp Tyr Lys Arg Ile Ala Ile Gly Thr Ala Ile His Gly Ile Tyr Leu
 130 135 140

Ser Val Asn Gly Ala Ile Ser Phe Lys Asn Leu Asn Arg Leu Ile Pro
 145 150 155 160

Gln Ile Tyr Leu Gly Ala Gly Tyr Tyr Asp Ile Ile Ser Ala Ile Glu
 165 170 175

Phe Ser Lys Glu Glu Thr Asn Asn Leu Tyr Phe Ser Ser Gly Val Tyr
 180 185 190

Gly Asp Ile Phe Leu Ile Ser Gln Lys Ser Gly Phe Ile Lys Lys Ile
 195 200 205

Ser Phe Pro Phe Lys Lys Gln Ile Ile Arg Ile Leu Asp Leu Ser Ser
 210 215 220

Lys Asn Val Glu Lys Ile Leu Val Arg Thr Tyr Asp Asn His Phe Tyr
 225 230 235 240

Ser Tyr Ile Asn Gly Gln Trp Val Phe Ile Gly Lys Leu Ser Leu Gln

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Lys	His	Ala	Leu	Trp	Asn	Lys	Lys	Thr	Asn	Lys	Pro	Trp	Ala	His	Leu				
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Tyr	Ile	Arg	Phe	Pro	Ser	Asp	Gly	Pro	Val	Ser	Leu	Ala	Ile	Ser	Arg				
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Ile	Met	Ala	Arg	Glu	Gln	Leu	Tyr	Val	Pro	Ile	Ser	Val	Asp	Ile	Tyr				
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Met	Leu	Ser	Asp	Tyr	Val	Asp	Val	Ile	Ser	Pro	Met	Phe	Tyr	Pro	Ser				
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His	Tyr	Thr	Asp	Asp	Phe	Leu	Pro	Ser	Asn	Phe	Tyr	Tyr	Thr	Lys	Arg				
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545

550

555

560

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<211> 1839

<212> DNA

<213> Homo sapiens

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<210> 348

<211> 1779

<212> DNA

<213> Homo sapiens

<400> 348

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ggtattttatc ttagtggttaa tggagctatt agttttaaaa atttaaactg tttgattccg 420
cagattttatt taggtgcagg atattacgat attatttagtg ctattgaatt ttcaaaagaa 480

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<210> 349

<211> 224

<212> PRT

<213> Homo sapiens

<400> 349

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Lys Asn Ser Phe Ser Glu Asn Glu Ile Asn Ile Phe Glu Asn Glu Asn
20 25 30

Tyr Ile Val Lys Glu Asn Ile Lys Thr Glu Ile Lys Lys Leu Lys Gln
35 40 45

Ser Phe Leu Leu Ala Ser Val Asp Val Ala Ile Ser Gln Pro Tyr Ile
50 55 60

Glu Leu Ala Asp Leu Asn Gly Glu Pro Ile Lys Glu Leu Glu Gly Ile
65 70 75 80

Ser Tyr Ser Phe Ile Asn Val Phe Ser Lys Ile Gly Ser Ser Ala Ile
85 90 95

Ile Ser Phe Asp Leu Ser Asn Glu Ala Ser Lys Lys Tyr Lys Ile Ile
100 105 110

Lys Leu Glu Phe Leu Ser Pro Asp Lys Gly Asn Phe Ile Asn Gln Leu
115 120 125

Ser Ser Leu Thr Ser Gly Lys Gln Gln Ser Lys Lys Glu Leu Ala Lys
130 135 140

Asp Ala Tyr Ser Phe Gly Thr Leu Arg Thr Glu Ser Leu Ser Lys Thr
145 150 155 160

Ile Ala Glu Tyr Tyr Lys Asp Asn Asn Trp Tyr Tyr Ile Leu Ala Ala

	165		170		175
Ile Thr Val Glu Asn Asn Ile Asn Lys Glu Thr Glu Lys Tyr Glu Ile	180		185		190
Arg Ile Asn Pro Lys Ile Tyr Asn Asp Phe Gln Lys Lys Leu Arg Leu	195		200		205
His Phe Lys Ser Asn Gln Ile Lys Lys Phe Pro Ile Pro Ile Ile Glu	210		215		220
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<211> 208					
<212> PRT					
<213> Homo sapiens					
<400> 350					
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Tyr Ile Val Lys Glu Asn Ile Lys Thr Glu Ile Lys Lys Leu Lys Gln	20		25		30
Ser Phe Leu Leu Ala Ser Val Asp Val Ala Ile Ser Gln Pro Tyr Ile	35		40		45
Glu Leu Ala Asp Leu Asn Gly Glu Pro Ile Lys Glu Leu Glu Gly Ile	50		55		60
Ser Tyr Ser Phe Ile Asn Val Phe Ser Lys Ile Gly Ser Ser Ala Ile	65		70		75
Ile Ser Phe Asp Leu Ser Asn Glu Ala Ser Lys Lys Tyr Lys Ile Ile	85		90		95
Lys Leu Glu Phe Leu Ser Pro Asp Lys Gly Asn Phe Ile Asn Gln Leu	100		105		110
Ser Ser Leu Thr Ser Gly Lys Gln Gln Ser Lys Lys Glu Leu Ala Lys	115		120		125
Asp Ala Tyr Ser Phe Gly Thr Leu Arg Thr Glu Ser Leu Ser Lys Thr	130		135		140
Ile Ala Glu Tyr Tyr Lys Asp Asn Asn Trp Tyr Tyr Ile Leu Ala Ala	145		150		155
Ile Thr Val Glu Asn Asn Ile Asn Lys Glu Thr Glu Lys Tyr Glu Ile	165		170		175
Arg Ile Asn Pro Lys Ile Tyr Asn Asp Phe Gln Lys Lys Leu Arg Leu	180		185		190
His Phe Lys Ser Asn Gln Ile Lys Lys Phe Pro Ile Pro Ile Ile Glu	195		200		205
<210> 351					
<211> 675					
<212> DNA					
<213> Homo sapiens					

<400> 351
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acagaaatta aaaaactaaa acaaagtttt ttacttgcat ctggtgatgt cgccattagc 180
caaccctaca tagaattggc agattttaa atggagaccga taaaagaact tgaagggatt 240
agttattcat ttataaatgt attttcaaaa attggatctt ctgctattat ttcatttgac 300
ctatcaaacg aagcttccaa gaaatacaaaa atcataaaat tagaattttt aagtccagat 360
aaaggcaatt ttattaacca gctaagcagc cttactagt gaaaacagca atcaaaaaaa 420
gagcttgcaa aagacgctta ctcatcttgg acattaagaa ctgaatctct ttcaaaaaaca 480
attgcagaat attacaaaga taacaactgg tattatattt tagcagcaat aacagtagaa 540
aataatataa ataaagaaac tgaaaaatac gaaattagaa ttaaccctaa aatatataat 600
gattttcaaa aaaaattgag attacatttt aaaagcaacc aaataaaaaa atttccaata 660
cccattatag aataa 675

<210> 352
<211> 627
<212> DNA
<213> Homo sapiens

<400> 352
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gaaaatataa aaacagaaat taaaaaacta aaacaaagtt ttttacttgc atctgttgat 120
gtcgccatta gccaacctta catagaattg gcagatttaa atggagaacc gataaaagaa 180
cttgaaggga ttagttattc atttataaat gtattttcaa aaattggatc ttctgctatt 240
atttcatttg acctatcaaa cgaagcttcc aagaaatata aaatcataaa attagaattt 300
ttaagtccag ataaaggcaa ttttattaac cagctaagca gccttactag tggaaaacag 360
caatcaaaaa aagagcttgc aaaagacgct tactcatttg gtacattaag aactgaatct 420
ctttcaaaaa caattgcaga atattacaaa gataacaact ggtattatat ttagcagca 480
ataacagtag aaaataatat aaataaagaa actgaaaaat acgaaattag aattaaccct 540
aaaatatata atgattttca aaaaaaattg agattacatt ttaaaagcaa ccaataaaaa 600
aaatttccaa taccattat agaataa 627

<210> 353
<211> 127
<212> PRT
<213> Homo sapiens

<400> 353
Met Lys Lys His Ile Ile Ile Gly Ile Ile Phe Val Ala Ile Leu Leu
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Phe Phe Lys Ile Leu Leu Ile Pro Arg Ile Gln Asn His Glu Asn Asn
20 25 30
Lys Asn Asn Ile Lys Met Ile Ile Ser Tyr Lys Gln Asp Lys Asn Arg
35 40 45
Leu Ser Leu Lys Ile Asn Ile Lys Thr Lys Lys Thr Thr Asn Leu Gly
50 55 60
Lys Ala Lys Leu Asp Ile Tyr Leu Asp Ser Lys Leu Ile Glu Ser Asn
65 70 75 80
Leu Leu Tyr Ile Ser Ser Lys Asn Phe Thr Thr Tyr Ala Asn Ile Ile
85 90 95
Tyr Gln Asn Glu Ser Leu Leu Ser Ile Ile Leu Lys Ser Asn Gly Asn
100 105 110

Asn Asn Val Phe Tyr Ser Lys Arg Ile Lys Pro Arg Gly Lys Ile
 115 120 125

<210> 354
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 354
 His Glu Asn Asn Lys Asn Asn Ile Lys Met Ile Ile Ser Tyr Lys Gln
 1 5 10 15

Asp Lys Asn Arg Leu Ser Leu Lys Ile Asn Ile Lys Thr Lys Lys Thr
 20 25 30

Thr Asn Leu Gly Lys Ala Lys Leu Asp Ile Tyr Leu Asp Ser Lys Leu
 35 40 45

Ile Glu Ser Asn Leu Leu Tyr Ile Ser Ser Lys Asn Phe Thr Thr Tyr
 50 55 60

Ala Asn Ile Ile Tyr Gln Asn Glu Ser Leu Leu Ser Ile Ile Leu Lys
 65 70 75 80

Ser Asn Gly Asn Asn Asn Val Phe Tyr Ser Lys Arg Ile Lys Pro Arg
 85 90 95

Gly Lys Ile

<210> 355
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 355
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 agctacaagc aagacaaaaa cagattatcg ctaaagataa acataaaaaac aaaaaaaact 180
 accaacctgg gaaaagccaa actagatatt tatctagaca gttaaattaat tgaaagcaat 240
 ttgctttata taagcagcaa aaactttaca acatatgcta atataatcta tcaaaatgaa 300
 agttttattaa gtataatatt aaagagtaat ggcaataata atgtctttta tagtaaaaga 360
 ataaaaccta gaggtaaaat atga 384

<210> 356
 <211> 300
 <212> DNA
 <213> Homo sapiens

<400> 356
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 gatattttatc tagacagtaa attaattgaa agcaatttgc tttatataag cagcaaaaac 180
 tttacaacat atgctaatat aatctatcaa aatgaaagtt tattaagtat aatattaaag 240
 agtaatggca ataataatgt cttttatagt aaaagaataa aacctagagg taaaatatga 300

<210> 357
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 357

Met Lys Lys His Tyr Lys Ala Leu Ile Leu Ser Leu Leu Phe Ala Ile
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Lys Ile Pro Phe Gly Thr Leu Pro Gly Ala Ile Met Pro Leu Asn Asn
35 40 45
Lys Phe Thr Asn Ser Lys Phe Asp Ile Lys Thr Tyr Asn Gly Leu Val
50 55 60
Tyr Ile Ala Glu Ile Lys Thr Asn Lys Leu Met Ile Phe Asn Ser Tyr
65 70 75 80
Gly Lys Leu Ile Gln Thr Tyr Gln Asn Gly Ile Phe Lys Thr Asn Pro
85 90 95
Asp Leu Lys Ile Lys Lys Ile Asp Phe Glu Gly Ile Gln Ala Ile Tyr
100 105 110
Pro Leu Lys Asp Phe Ile Ile Val Ala Asp Lys Leu Asn Asn Lys Lys
115 120 125
Ser Lys Phe Asn Gln Lys Glu Asn Ile Ala Tyr Phe Met Arg Ile Leu
130 135 140
Ile Leu Asn Lys Asn Ser Ser Val Glu Ile Leu Gly Gln Glu Gly Leu
145 150 155 160
Asn Gly Met Pro Phe Pro Gln Ile Tyr Asp Val Asn Val Asp Glu Asn
165 170 175
Gly Asn Ile Ala Ile Ile Ser Ile Tyr Ser Glu Gly Tyr Ile Ile Tyr
180 185 190
Ser Tyr Asn Lys Glu Phe Ser Pro Leu Tyr Lys Ile Tyr Val Asn Lys
195 200 205
Asn Leu Leu Lys Thr Ile Asp Asn Gln Lys Lys Lys Tyr Asn Ile Ser
210 215 220
Ile Asp Lys Val Phe Phe Glu Val Asn Lys Lys Thr Leu Tyr Val Lys
225 230 235 240
Thr Thr Tyr Tyr Glu Asn Ile Gly Asp Asn Glu Asn Ile Asn Asp Leu
245 250 255
Gly Ile Lys Ile Lys Asp Gln Tyr Ile Tyr Lys Met Ser Leu Lys Lys
260 265 270
Asn Lys Glu Leu Glu Val Ile Asn Lys Ile Ala Leu Pro Lys Asn Leu
275 280 285
Leu Asp Asp Lys Gln Glu Ser Phe Ile Asn Ile Ile Lys Ile Gln Lys
290 295 300
Asp Lys Ile Ile Ala Ser Thr Asn Met Lys Asn Leu Ser Asn Asn Leu

305 310 315 320
 Ile Trp Lys Leu Asp Ser Lys Gly Ser Ile Lys Glu Gln Ile Ala Leu
 325 330 335
 Ile Glu Pro Pro Asn Leu Met Phe Leu Ser Glu Ser Leu Ser Lys Asp
 340 345 350
 Gly Ile Leu Ser Ile Leu Tyr Gly Gly Lys Thr Gly Val Ser Val Tyr
 355 360 365
 Trp Trp Asn Leu Asn Ala Leu Leu Lys Leu
 370 375

 <210> 358
 <211> 357
 <212> PRT
 <213> Homo sapiens

 <400> 358
 Lys Thr Leu Asn Glu Leu Gly Glu Glu Gln Phe Lys Ile Pro Phe Gly
 1 5 10 15
 Thr Leu Pro Gly Ala Ile Met Pro Leu Asn Asn Lys Phe Thr Asn Ser
 20 25 30
 Lys Phe Asp Ile Lys Thr Tyr Asn Gly Leu Val Tyr Ile Ala Glu Ile
 35 40 45
 Lys Thr Asn Lys Leu Met Ile Phe Asn Ser Tyr Gly Lys Leu Ile Gln
 50 55 60
 Thr Tyr Gln Asn Gly Ile Phe Lys Thr Asn Pro Asp Leu Lys Ile Lys
 65 70 75 80
 Lys Ile Asp Phe Glu Gly Ile Gln Ala Ile Tyr Pro Leu Lys Asp Phe
 85 90 95
 Ile Ile Val Ala Asp Lys Leu Asn Asn Lys Lys Ser Lys Phe Asn Gln
 100 105 110
 Lys Glu Asn Ile Ala Tyr Phe Met Arg Ile Leu Ile Leu Asn Lys Asn
 115 120 125
 Ser Ser Val Glu Ile Leu Gly Gln Glu Gly Leu Asn Gly Met Pro Phe
 130 135 140
 Pro Gln Ile Tyr Asp Val Asn Val Asp Glu Asn Gly Asn Ile Ala Ile
 145 150 155 160
 Ile Ser Ile Tyr Ser Glu Gly Tyr Ile Ile Tyr Ser Tyr Asn Lys Glu
 165 170 175
 Phe Ser Pro Leu Tyr Lys Ile Tyr Val Asn Lys Asn Leu Leu Lys Thr
 180 185 190
 Ile Asp Asn Gln Lys Lys Lys Tyr Asn Ile Ser Ile Asp Lys Val Phe
 195 200 205
 Phe Glu Val Asn Lys Lys Thr Leu Tyr Val Lys Thr Thr Tyr Tyr Glu

210	215	220
Asn Ile Gly Asp Asn Glu Asn Ile Asn Asp Leu Gly Ile Lys Ile Lys		
225	230	235 240
Asp Gln Tyr Ile Tyr Lys Met Ser Leu Lys Lys Asn Lys Glu Leu Glu		
	245	250 255
Val Ile Asn Lys Ile Ala Leu Pro Lys Asn Leu Leu Asp Asp Lys Gln		
	260	265 270
Glu Ser Phe Ile Asn Ile Ile Lys Ile Gln Lys Asp Lys Ile Ile Ala		
	275	280 285
Ser Thr Asn Met Lys Asn Leu Ser Asn Asn Leu Ile Trp Lys Leu Asp		
	290	295 300
Ser Lys Gly Ser Ile Lys Glu Gln Ile Ala Leu Ile Glu Pro Pro Asn		
305	310	315 320
Leu Met Phe Leu Ser Glu Ser Leu Ser Lys Asp Gly Ile Leu Ser Ile		
	325	330 335
Leu Tyr Gly Gly Lys Thr Gly Val Ser Val Tyr Trp Trp Asn Leu Asn		
	340	345 350
Ala Leu Leu Lys Leu		
355		

<210> 359

<211> 1137

<212> DNA

<213> Homo sapiens

<400> 359

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ggtgcaataa	tgccctctgaa	taacaaat	acaaattcaa	aatttgacat	caaaacgtat	180
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aaaaaaatag	attttgagg	aattcaagca	atataccac	taaaagattt	tattattgtc	360
gcagacaaac	taaataataa	aaaatcaaaa	ttcaaccaa	aagagaatat	tgctacttc	420
atgagaatac	taataactaa	caaaaactca	tctgtagaaa	ttttgggtca	agaagggtta	480
aacggaatgc	catttccaca	aatttatgat	gttaatgttg	atgaaaatgg	caacattgca	540
ataatatcaa	tatatagcga	aggatatata	atatattctt	acaataaaga	attttccccg	600
ctttataaaa	tttacgtcaa	caaaaacctg	ttaaaaacaa	tagacaatca	aaagaaaaaa	660
tacaacattt	caatagataa	ggtttttttt	gaagtcaaca	aaaaaactct	ttatgtaaaa	720
actacttact	atgaaaacat	tggtgacaat	gaaaatataa	acgatcttgg	aattaaaatt	780
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atatggaaat	tagacagcaa	gggctcaatt	aaagaacaaa	tagctttaat	tgagcctcca	1020
aatttaaatgt	ttctctctga	gagtttatct	aaagatggaa	tacttagtat	actttatggc	1080
ggaaaaactg	gtgttagtgt	ttactgggtg	aatttaaagt	cattattaaa	attataa	1137

<210> 360

<211> 1074

<212> DNA

<213> Homo sapiens

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<400> 360
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gggctagtgt acattgcaga aataaaaaaca aataaattaa tgattttcaa ctcatacggg 180
aaactaatac aaacatatca aaatggaata tttaaaacaa accccgattt aaaaataaaa 240
aaaatagatt ttgaaggaat tcaagcaata taccactaa aagattttat tattgtcgca 300
gacaaactaa ataataaaaa atcaaaattc aacccaaaaag agaattattgc ctacttcatg 360
agaatactaa tactaaacaa aaactcatct gtagaaattt tgggtcaaga aggttttaac 420
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tataaaattt acgtcaacaa aaacctgtta aaaacaatag acaatcaaaa gaaaaaatac 600
aacatttcaa tagataaggt tttttttgaa gtcaacaaaa aaactcttta tgtaaaaact 660
acttactatg aaaacattgg tgacaatgaa aatataaacg atcttggaat taaaattaaa 720
gatcaatata tctataaaat gagtttgaaa aaaaacaaag aattagaagt gataaataaa 780
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tggaatttag acagcaaggg ctcaattaaa gaacaaatag ctttaattga gcctccaaat 960
ttaatgtttc tctctgagag tttatctaaa gatggaatac ttagtatact ttatggcgga 1020
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<210> 361
<211> 290
<212> PRT
<213> Homo sapiens

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Asp Glu Lys Lys Ser Ser Lys Asn Leu Lys Ser Val Lys Ile Gly Tyr
      20              25              30

Val Asn Trp Gly Gly Glu Thr Ala Ala Thr Asn Val Leu Lys Val Val
      35              40              45

Phe Glu Lys Met Gly Tyr Asn Ala Glu Ile Phe Ser Val Thr Thr Ser
      50              55              60

Ile Met Tyr Gln Tyr Leu Ala Ser Gly Lys Ile Asp Gly Thr Val Ser
      65              70              75              80

Ser Trp Val Pro Thr Ala Asp Lys Phe Tyr Tyr Glu Lys Leu Lys Thr
      85              90              95

Lys Phe Val Asp Leu Gly Ala Asn Tyr Glu Gly Thr Ile Gln Gly Phe
      100             105             110

Val Val Pro Ser Tyr Val Pro Ile Ser Ser Ile Ser Glu Leu Lys Gly
      115             120             125

Lys Gly Asp Lys Phe Lys Asn Lys Met Ile Gly Ile Asp Ala Gly Ala
      130             135             140

Gly Thr Gln Ile Val Thr Glu Gln Ala Leu Asn Tyr Tyr Gly Leu Ser
      145             150             155             160

Lys Glu Tyr Glu Leu Val Pro Ser Ser Glu Ser Val Met Leu Ala Ser
      165             170             175

Leu Asp Ser Ser Ile Lys Arg Asn Glu Trp Ile Leu Val Pro Leu Trp

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180	185	190
Lys Pro His Trp Ala Phe Ser Arg Tyr Asp Ile Lys Phe Leu Asp Asp		
195	200	205
Pro Asp Leu Ile Met Gly Gly Ile Glu Ser Val His Thr Leu Val Arg		
210	215	220
Leu Gly Leu Glu Asn Asp Asp Phe Asp Ala Tyr Tyr Val Phe Asp His		
225	230	235
Phe Tyr Trp Ser Asp Asp Leu Ile Leu Pro Leu Met Asp Lys Asn Asp		
	245	250
Lys Glu Pro Gly Lys Glu Tyr Arg Asn Ala Val Glu Phe Val Glu Lys		
	260	265
Asn Lys Glu Ile Val Lys Thr Trp Val Pro Glu Lys Tyr Lys Thr Leu		
	275	280
Phe Asp		
290		

<210> 362
 <211> 275
 <212> PRT
 <213> Homo sapiens

<400> 362
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Tyr Val Asn Trp Gly Gly Glu Thr Ala Ala Thr Asn Val Leu Lys Val
20 25 30
Val Phe Glu Lys Met Gly Tyr Asn Ala Glu Ile Phe Ser Val Thr Thr
35 40 45
Ser Ile Met Tyr Gln Tyr Leu Ala Ser Gly Lys Ile Asp Gly Thr Val
50 55 60
Ser Ser Trp Val Pro Thr Ala Asp Lys Phe Tyr Tyr Glu Lys Leu Lys
65 70 75 80
Thr Lys Phe Val Asp Leu Gly Ala Asn Tyr Glu Gly Thr Ile Gln Gly
85 90 95
Phe Val Val Pro Ser Tyr Val Pro Ile Ser Ser Ile Ser Glu Leu Lys
100 105 110
Gly Lys Gly Asp Lys Phe Lys Asn Lys Met Ile Gly Ile Asp Ala Gly
115 120 125
Ala Gly Thr Gln Ile Val Thr Glu Gln Ala Leu Asn Tyr Tyr Gly Leu
130 135 140
Ser Lys Glu Tyr Glu Leu Val Pro Ser Ser Glu Ser Val Met Leu Ala
145 150 155 160
Ser Leu Asp Ser Ser Ile Lys Arg Asn Glu Trp Ile Leu Val Pro Leu

165	170	175
Trp Lys Pro His Trp Ala Phe Ser Arg Tyr Asp Ile Lys Phe Leu Asp		
180	185	190
Asp Pro Asp Leu Ile Met Gly Gly Ile Glu Ser Val His Thr Leu Val		
195	200	205
Arg Leu Gly Leu Glu Asn Asp Asp Phe Asp Ala Tyr Tyr Val Phe Asp		
210	215	220
His Phe Tyr Trp Ser Asp Asp Leu Ile Leu Pro Leu Met Asp Lys Asn		
225	230	235
Asp Lys Glu Pro Gly Lys Glu Tyr Arg Asn Ala Val Glu Phe Val Glu		
245	250	255
Lys Asn Lys Glu Ile Val Lys Thr Trp Val Pro Glu Lys Tyr Lys Thr		
260	265	270
Leu Phe Asp		
275		

<210> 363
 <211> 873
 <212> DNA
 <213> Homo sapiens

<400> 363
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 gctacaaatg tattaaggt tgtttttgag aaaatgggct acaatgcaga aatatttttca 180
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Ser Ile Thr Ile Asn Leu Asn Phe Pro His Lys Thr Asn Leu Glu Tyr
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 Ile Ile Val Val Phe Gly Ile Met Ala Ser Gln Phe Glu Ser Phe Leu
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Lys Thr Asp Phe Glu Asp Leu Ser Glu Tyr Val Glu Tyr Asn Gly Leu
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<210> 369

<211> 129

<212> PRT

<213> Homo sapiens

<400> 369

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Met Ile Tyr Leu Lys Lys Met Gly Asn Asp Met Thr Lys Phe Tyr Asn
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Tyr Arg Ile Glu Ile Val Ser Asn Leu Ser Leu Glu Leu Asp Val Phe
35 40 45

Glu Cys Ile Glu Lys Ile Glu Gln Glu Leu Gly Glu Ser Ile Tyr Tyr
50 55 60

Ser Lys Ile Gly Asn Val Tyr Gly Lys Gly Lys Lys Gly Glu Lys His
65 70 75 80

Gly Asn Gly Val Trp Pro Glu Glu Asn Phe Ile Leu Ile Ile Tyr Thr
85 90 95

Ser Asn Gln Ser Ile Val Glu Arg Leu Lys Asp Ile Val Asp Asp Leu
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Asn Arg Ser Tyr Pro Thr Glu Gly Ile Asn Leu Phe Val Leu Arg Asn
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Ser

<210> 370

<211> 109

<212> PRT

<213> Homo sapiens

<400> 370

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20 25 30

Lys Ile Glu Gln Glu Leu Gly Glu Ser Ile Tyr Tyr Ser Lys Ile Gly
35 40 45

Asn Val Tyr Gly Lys Gly Lys Lys Gly Glu Lys His Gly Asn Gly Val
50 55 60

Trp Pro Glu Glu Asn Phe Ile Leu Ile Ile Tyr Thr Ser Asn Gln Ser
65 70 75 80

Ile Val Glu Arg Leu Lys Asp Ile Val Asp Asp Leu Asn Arg Ser Tyr
85 90 95

Pro Thr Glu Gly Ile Asn Leu Phe Val Leu Arg Asn Ser
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<210> 371

<211> 390

<212> DNA

<213> Homo sapiens

<400> 371

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<210> 372

<211> 330

<212> DNA

<213> Homo sapiens

<400> 372

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<210> 373

<211> 625

<212> PRT

<213> Homo sapiens

<400> 373

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Ala	Ile	Thr	Leu	Leu	Thr	Ile	Tyr	Lys	Tyr	Phe	Thr	Leu	Met	Ala	Phe
			20					25					30		
Asn	Asn	Ser	Pro	Asp	Asn	Thr	Ile	Ser	Leu	Lys	Ser	Asn	Asp	Ile	Ala
		35					40					45			
Lys	Arg	Gly	Thr	Ile	Tyr	Asp	Arg	Asn	Gly	Lys	Pro	Ile	Ala	Phe	Ser
	50					55					60				
Ser	Lys	Ser	Tyr	Ser	Ile	Gly	Thr	Asn	Pro	Gln	Lys	Ile	Glu	Asn	Ile
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Val	Ser	Thr	Ser	Glu	Thr	Leu	Gly	Ala	Ile	Leu	Gln	Ile	Asn	Ser	Arg
				85					90					95	
Ile	Leu	Lys	Glu	Lys	Leu	Ser	Ser	Asn	Lys	Gly	Phe	Leu	Tyr	Ile	Lys
			100					105					110		
Arg	Lys	Ile	Lys	Arg	Glu	Glu	Ser	Asp	Leu	Ile	Lys	Arg	Ile	Gln	Ala
		115					120					125			
Glu	Gly	Arg	Leu	Ser	Asn	Ile	Thr	Leu	Tyr	Pro	Asp	Tyr	Thr	Arg	Ile
	130					135					140				
Tyr	Pro	Phe	Arg	Asn	Thr	Thr	Ser	Asn	Ile	Thr	Gly	Phe	Val	Gly	Thr
145					150					155					160
Asp	Asn	Leu	Gly	Leu	Glu	Gly	Ile	Glu	Phe	Ser	Leu	Asn	Ser	Ile	Leu
			165						170					175	
Gly	Lys	Asp	Lys	Thr	Lys	Gln	Gln	Phe	Leu	Asn	Glu	Glu	Pro	Glu	Thr
			180					185					190		
Asn	Asn	Ile	His	Leu	Thr	Ile	Asp	Met	Asp	Ile	Gln	Gln	Gly	Val	Ser
		195					200					205			
Lys	Ile	Ala	Lys	Lys	Tyr	Phe	Lys	Glu	Asn	Asn	Pro	Glu	Ser	Leu	Ile
	210					215					220				
Thr	Leu	Val	Met	Asn	Ser	Gln	Asn	Gly	Glu	Ile	Leu	Ser	Met	Val	Gln
225					230					235					240
Phe	Pro	Gln	Tyr	Asp	Ala	Asn	Phe	Tyr	Ser	Lys	Tyr	Pro	Glu	Glu	Ile
				245					250					255	

Arg Lys Asn Leu Ser Ser Ser Leu Thr Tyr Glu Pro Gly Ser Ile Asn
 260 265 270
 Lys Ile Phe Thr Val Ala Ile Ile Leu Glu Ser Gly Lys Leu Asn Leu
 275 280 285
 Glu Glu Lys Phe Leu Asp Asn Gly Ile Tyr Gln Lys Gln Phe Pro Ser
 290 295 300
 Gly Glu Lys Ile Thr Ile Lys Thr Leu Asn Pro Pro Tyr Lys His Ile
 305 310 315 320
 Asp Ser Thr Glu Ile Leu Ile Tyr Ser Ser Asn Val Gly Ile Ala Tyr
 325 330 335
 Ile Thr Glu Lys Val Ser Asn Glu Tyr Phe Tyr Lys Lys Leu Leu Asp
 340 345 350
 Phe Gly Phe Gly Glu Lys Val Gly Val Pro Phe Pro Gly Glu Thr Lys
 355 360 365
 Gly Leu Leu Asn His Tyr Ser Lys Trp Ser Gly Arg Ser Lys Ala Thr
 370 375 380
 Ile Gly Phe Gly Gln Glu Ile Gly Val Ser Ala Val Gln Ile Leu Gln
 385 390 395 400
 Ala Ala Ser Ile Leu Ser Asn Asn Gly Ile Met Leu Lys Pro Arg Ile
 405 410 415
 Ile Lys Lys Ile Ser Asn Asp Lys Gly Glu Asn Ile Lys Glu Phe Asp
 420 425 430
 Lys Glu Glu Ile Arg Lys Val Ile Ser Lys Asn Ser Ala Gln Lys Val
 435 440 445
 Leu Lys Met Met Arg Glu Val Val Asn Lys Gly Gly Ile Pro Asn Leu
 450 455 460
 Lys Ile Lys Asn Leu Asp Ile Ser Ala Lys Ser Gly Thr Ser Gln Ala
 465 470 475 480
 Ile Asp Arg Lys Thr Gly Lys Tyr Ser Glu Glu Asp Tyr Thr Ser Ser
 485 490 495
 Ile Leu Ala Ile Tyr Pro Thr Glu Gln Pro Lys Tyr Ile Ile Tyr Ile
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 Val Tyr Arg Tyr Pro Lys Lys Ile Ile Tyr Gly Thr Arg Ile Ala Ala
 515 520 525
 Pro Met Ala Lys Glu Ile Ile Glu Phe Ile Glu His Gln Gln Asn Thr
 530 535 540
 Ile Ala Tyr Lys Lys Ile Lys Met Pro Ser Lys Ile Lys Ile Pro Lys
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 Ala Glu Thr Asn Tyr Lys Asn Lys Thr Tyr Leu Pro Asn Phe Ile Asn
 565 570 575

Leu Ser Lys Arg Glu Ala Ile Asp Ile Leu Lys Tyr Tyr Lys Asn Thr
 580 585 590
 Met Lys Ile Lys Ile Asn Gly Asp Gly Phe Val Tyr Lys Gln Ser Ile
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 610 615 620
 Lys
 625
 <210> 374
 <211> 594
 <212> PRT
 <213> Homo sapiens
 <400> 374
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 35 40 45
 Ile Val Ser Thr Ser Glu Thr Leu Gly Ala Ile Leu Gln Ile Asn Ser
 50 55 60
 Arg Ile Leu Lys Glu Lys Leu Ser Ser Asn Lys Gly Phe Leu Tyr Ile
 65 70 75 80
 Lys Arg Lys Ile Lys Arg Glu Glu Ser Asp Leu Ile Lys Arg Ile Gln
 85 90 95
 Ala Glu Gly Arg Leu Ser Asn Ile Thr Leu Tyr Pro Asp Tyr Thr Arg
 100 105 110
 Ile Tyr Pro Phe Arg Asn Thr Thr Ser Asn Ile Thr Gly Phe Val Gly
 115 120 125
 Thr Asp Asn Leu Gly Leu Glu Gly Ile Glu Phe Ser Leu Asn Ser Ile
 130 135 140
 Leu Gly Lys Asp Lys Thr Lys Gln Gln Phe Leu Asn Glu Glu Pro Glu
 145 150 155 160
 Thr Asn Asn Ile His Leu Thr Ile Asp Met Asp Ile Gln Gln Gly Val
 165 170 175
 Ser Lys Ile Ala Lys Lys Tyr Phe Lys Glu Asn Asn Pro Glu Ser Leu
 180 185 190
 Ile Thr Leu Val Met Asn Ser Gln Asn Gly Glu Ile Leu Ser Met Val
 195 200 205
 Gln Phe Pro Gln Tyr Asp Ala Asn Phe Tyr Ser Lys Tyr Pro Glu Glu
 210 215 220

Ile Arg Lys Asn Leu Ser Ser Ser Leu Thr Tyr Glu Pro Gly Ser Ile
 225 230 235 240
 Asn Lys Ile Phe Thr Val Ala Ile Ile Leu Glu Ser Gly Lys Leu Asn
 245 250 255
 Leu Glu Glu Lys Phe Leu Asp Asn Gly Ile Tyr Gln Lys Gln Phe Pro
 260 265 270
 Ser Gly Glu Lys Ile Thr Ile Lys Thr Leu Asn Pro Pro Tyr Lys His
 275 280 285
 Ile Asp Ser Thr Glu Ile Leu Ile Tyr Ser Ser Asn Val Gly Ile Ala
 290 295 300
 Tyr Ile Thr Glu Lys Val Ser Asn Glu Tyr Phe Tyr Lys Lys Leu Leu
 305 310 315 320
 Asp Phe Gly Phe Gly Glu Lys Val Gly Val Pro Phe Pro Gly Glu Thr
 325 330 335
 Lys Gly Leu Leu Asn His Tyr Ser Lys Trp Ser Gly Arg Ser Lys Ala
 340 345 350
 Thr Ile Gly Phe Gly Gln Glu Ile Gly Val Ser Ala Val Gln Ile Leu
 355 360 365
 Gln Ala Ala Ser Ile Leu Ser Asn Asn Gly Ile Met Leu Lys Pro Arg
 370 375 380
 Ile Ile Lys Lys Ile Ser Asn Asp Lys Gly Glu Asn Ile Lys Glu Phe
 385 390 395 400
 Asp Lys Glu Glu Ile Arg Lys Val Ile Ser Lys Asn Ser Ala Gln Lys
 405 410 415
 Val Leu Lys Met Met Arg Glu Val Val Asn Lys Gly Gly Ile Pro Asn
 420 425 430
 Leu Lys Ile Lys Asn Leu Asp Ile Ser Ala Lys Ser Gly Thr Ser Gln
 435 440 445
 Ala Ile Asp Arg Lys Thr Gly Lys Tyr Ser Glu Glu Asp Tyr Thr Ser
 450 455 460
 Ser Ile Leu Ala Ile Tyr Pro Thr Glu Gln Pro Lys Tyr Ile Ile Tyr
 465 470 475 480
 Ile Val Tyr Arg Tyr Pro Lys Lys Ile Ile Tyr Gly Thr Arg Ile Ala
 485 490 495
 Ala Pro Met Ala Lys Glu Ile Ile Glu Phe Ile Glu His Gln Gln Asn
 500 505 510
 Thr Ile Ala Tyr Lys Lys Ile Lys Met Pro Ser Lys Ile Lys Ile Pro
 515 520 525
 Lys Ala Glu Thr Asn Tyr Lys Asn Lys Thr Tyr Leu Pro Asn Phe Ile
 530 535 540

Asn Leu Ser Lys Arg Glu Ala Ile Asp Ile Leu Lys Tyr Tyr Lys Asn
545 550 555 560

Thr Met Lys Ile Lys Ile Asn Gly Asp Gly Phe Val Tyr Lys Gln Ser
565 570 575

Ile Ser Pro Asn Thr Lys Leu Glu Asp Ile Thr Glu Leu Glu Leu Tyr
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Leu Lys

<210> 375

<211> 1878

<212> DNA

<213> Homo sapiens

<400> 375

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<210> 376

<211> 1785

<212> DNA

<213> Homo sapiens

<400> 376

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acaaatcctc aaaaaataga aaatattgta agcacatctg aaactcttgg tgcaatactt 180

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<210> 377

<211> 203

<212> PRT

<213> Homo sapiens

<400> 377

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Phe Val Ser Ile Ile Val Val Phe Tyr Asn Ser Leu Gly Lys Asp Tyr
      20              25              30

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Val Lys Ser Gly Gly Glu Ile Val Glu Asn Leu Glu Lys Asp Leu Asn
      35              40              45

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Asp Tyr Leu Lys Glu Asn Asp Ala Lys Glu Arg Glu Lys Ile Phe Leu
      50              55              60

```

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Arg Ile Arg Glu Leu Ile Ser Lys Glu Lys Glu Ile Ser Ser Tyr Phe
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Ile Ser Arg Phe Tyr Leu Ala Arg Ala Val Tyr Phe Gln Ser Gln Ala
      85              90              95

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Gln Tyr Asp Glu Ala Ile Lys Asp Leu Asp Ile Val Ile Lys Ala Lys
      100             105             110

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Gly Ile Glu Ser Glu Ile Ala Phe Leu Asn Lys Ala Ala Val Tyr Glu
      115             120             125

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Lys Met Gly Leu Lys Glu Asp Ala Leu Leu Val Tyr Glu Asp Leu Ile
      130             135             140

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Asn Ser Thr Ser Leu Asp Phe Leu Lys Val Arg Ala Leu Leu Ser Lys
 145 150 155 160

Ala Ile Leu Ile Glu Glu Lys Asp Lys Glu Leu Ala Val Lys Val Tyr
 165 170 175

Glu Glu Ile Val Lys Phe Pro Tyr Glu Asn Asn Leu Tyr Ile Asn Met
 180 185 190

Ala Asn Asn Lys Ile Leu Glu Leu Lys Gln Asn
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<210> 378

<211> 179

<212> PRT

<213> Homo sapiens

<400> 378

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 20 25 30

Lys Glu Arg Glu Lys Ile Phe Leu Arg Ile Arg Glu Leu Ile Ser Lys
 35 40 45

Glu Lys Glu Ile Ser Ser Tyr Phe Ile Ser Arg Phe Tyr Leu Ala Arg
 50 55 60

Ala Val Tyr Phe Gln Ser Gln Ala Gln Tyr Asp Glu Ala Ile Lys Asp
 65 70 75 80

Leu Asp Ile Val Ile Lys Ala Lys Gly Ile Glu Ser Glu Ile Ala Phe
 85 90 95

Leu Asn Lys Ala Ala Val Tyr Glu Lys Met Gly Leu Lys Glu Asp Ala
 100 105 110

Leu Leu Val Tyr Glu Asp Leu Ile Asn Ser Thr Ser Leu Asp Phe Leu
 115 120 125

Lys Val Arg Ala Leu Leu Ser Lys Ala Ile Leu Ile Glu Glu Lys Asp
 130 135 140

Lys Glu Leu Ala Val Lys Val Tyr Glu Glu Ile Val Lys Phe Pro Tyr
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Glu Asn Asn Leu Tyr Ile Asn Met Ala Asn Asn Lys Ile Leu Glu Leu
 165 170 175

Lys Gln Asn

<210> 379

<211> 612

<212> DNA

<213> Homo sapiens

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atttcaaggt tctatttagc cagagctgtt ttttccaaa gtcaagcaca gtatgatgag 300
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aagcaaaatt aa 612

<210> 380
<211> 540
<212> DNA
<213> Homo sapiens

<400> 380
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aggataaggg agcttatttc aaaggaaaaa gaaatttcat cttattttat ttcaagggtc 180
tatttagcca gagctgttta tttccaaagt caagcacagt atgatgaggc tattaaagat 240
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gcagtttatg aaaaaatggg attaaaagaa gatgctttgt tagtttatga agatcttatc 360
aatagtacta gtttgattt tttaaaggta agagctcttt tgagtaaggc aatattgatt 420
gaggaaaaag ataaagagct tgctgtgaaa gtatacgaag agattgttaa gtttccgtat 480
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<210> 381
<211> 504
<212> PRT
<213> Homo sapiens

<400> 381
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20 25 30
Ala Leu Gly Gly Leu Ile Gly Tyr Leu Thr Phe Asn Ile Thr Glu Asn
35 40 45
Tyr Phe Ile Glu Ala Phe Ser Gly Leu Val Glu Ala Glu Thr Met Ser
50 55 60
Ser Val Gly Arg Ile Asn Phe Phe Gly Val Gln Thr Leu Asn Thr Gly
65 70 75 80
Ile Ala Gly Ser Leu Ala Val Gly Leu Leu Val Gly Tyr Leu His Asn
85 90 95
Lys Phe Tyr Asn Met Lys Leu Pro Lys Pro Phe Val Phe Phe Ser Glu
100 105 110
Cys His Phe Val Pro Ile Val Ile Ile Leu Pro Phe Cys Val Phe Leu
115 120 125
Ala Ile Phe Phe Cys Leu Ile Trp Ser Ser Phe Asp Asp Leu Ile Ala

130 135 140
 Ser Leu Gly Leu Phe Val Phe Arg Phe Glu Tyr Phe Gly Ser Phe Leu
 145 150 155 160
 Tyr Gly Phe Leu Asn Arg Leu Leu Leu Pro Leu Gly Leu His Ser Ile
 165 170 175
 Leu Ser Phe Pro Phe Glu Phe Thr Ser Leu Gly Gly Val Glu Ile Val
 180 185 190
 Asn Gly Asp Thr Val Arg Gly Leu Lys Asn Ile Phe Tyr Ala Gln Leu
 195 200 205
 Leu Asp Pro Ser Leu Gly Lys Phe Ser Ser Gly Phe Ala Lys Ile Ser
 210 215 220
 Ser Gly Phe Tyr Leu Ser Ile Met Phe Gly Leu Pro Gly Ala Ala Leu
 225 230 235 240
 Gly Val Tyr Lys Gly Ile Val His Glu Asp Lys Asn Lys Val Ala Ala
 245 250 255
 Leu Leu Phe Ser Gly Ala Leu Thr Ala Phe Leu Thr Gly Ile Thr Glu
 260 265 270
 Pro Leu Glu Phe Leu Phe Ile Phe Thr Ala Pro Leu Leu Tyr Phe Val
 275 280 285
 His Ala Ala Tyr Ser Gly Phe Ala Leu Leu Leu Ala Asn Phe Phe Asn
 290 295 300
 Val Thr Ile Gly Asn Ser Phe Ser Thr Gly Phe Leu Asp Phe Phe Met
 305 310 315 320
 Phe Gly Ile Leu Gln Gly Asn Ser Lys Thr Asn Trp Ile Ser Val Leu
 325 330 335
 Pro Leu Gly Ala Met Phe Phe Ala Leu Tyr Tyr Phe Thr Phe Ser Trp
 340 345 350
 Leu Tyr Arg Tyr Phe Asp Phe Gln Ile Phe Val Thr Asp Asp Pro Phe
 355 360 365
 Phe Glu Gly Gln Glu Gly Lys Leu Glu Ser Leu Gly Ile Ala His Leu
 370 375 380
 Leu Ile Gln Gly Leu Gly Gly Phe Asp Asn Ile Thr Lys Leu Asp Val
 385 390 395 400
 Cys Ser Thr Arg Leu His Val Asp Val Val Asn Thr Glu Leu Val Asp
 405 410 415
 Asn Asn Leu Leu Lys Glu Ala Gly Val Leu Lys Ile Gly Leu Val Asn
 420 425 430
 Gly Lys Val Gln Leu Phe Tyr Gly Ser Asn Val Tyr Tyr Ile Lys Asn
 435 440 445
 Ala Ile Asp Thr Tyr Ser Pro Lys Ser Leu Phe Glu Ala Ser Val Met

450 455 460
 Val Ala Val Asp Asn Val Lys Lys Gly Phe Lys Thr Tyr Ile Glu Met
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 Lys Glu Asp Lys Lys Leu Glu Lys Gln Gly Lys Ser Gly Lys Thr Tyr
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 Lys Leu Ser Glu Leu Glu Glu Asp
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 <210> 382
 <211> 479
 <212> PRT
 <213> Homo sapiens

 <400> 382
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 Val Glu Ala Glu Thr Met Ser Ser Val Gly Arg Ile Asn Phe Phe Gly
 35 40 45
 Val Gln Thr Leu Asn Thr Gly Ile Ala Gly Ser Leu Ala Val Gly Leu
 50 55 60
 Leu Val Gly Tyr Leu His Asn Lys Phe Tyr Asn Met Lys Leu Pro Lys
 65 70 75 80
 Pro Phe Val Phe Phe Ser Glu Cys His Phe Val Pro Ile Val Ile Ile
 85 90 95
 Leu Pro Phe Cys Val Phe Leu Ala Ile Phe Phe Cys Leu Ile Trp Ser
 100 105 110
 Ser Phe Asp Asp Leu Ile Ala Ser Leu Gly Leu Phe Val Phe Arg Phe
 115 120 125
 Glu Tyr Phe Gly Ser Phe Leu Tyr Gly Phe Leu Asn Arg Leu Leu Leu
 130 135 140
 Pro Leu Gly Leu His Ser Ile Leu Ser Phe Pro Phe Glu Phe Thr Ser
 145 150 155 160
 Leu Gly Gly Val Glu Ile Val Asn Gly Asp Thr Val Arg Gly Leu Lys
 165 170 175
 Asn Ile Phe Tyr Ala Gln Leu Leu Asp Pro Ser Leu Gly Lys Phe Ser
 180 185 190
 Ser Gly Phe Ala Lys Ile Ser Ser Gly Phe Tyr Leu Ser Ile Met Phe
 195 200 205
 Gly Leu Pro Gly Ala Ala Leu Gly Val Tyr Lys Gly Ile Val His Glu
 210 215 220
 Asp Lys Asn Lys Val Ala Ala Leu Leu Phe Ser Gly Ala Leu Thr Ala

225		230		235		240
Phe Leu Thr Gly	Ile Thr Glu Pro Leu Glu	Phe Leu Phe Ile Phe Thr				
	245	250		255		
Ala Pro Leu Leu Tyr Phe Val His	Ala Ala Tyr Ser Gly Phe Ala Leu					
	260	265		270		
Leu Leu Ala Asn Phe Phe Asn Val Thr Ile Gly	Asn Ser Phe Ser Thr					
	275	280		285		
Gly Phe Leu Asp Phe Phe Met Phe Gly Ile Leu Gln Gly	Asn Ser Lys					
	290	295		300		
Thr Asn Trp Ile Ser Val Leu Pro Leu Gly Ala Met Phe Phe Ala Leu						
	305	310		315		320
Tyr Tyr Phe Thr Phe Ser Trp Leu Tyr Arg Tyr Phe Asp Phe Gln Ile						
	325	330		335		
Phe Val Thr Asp Asp Pro Phe Phe Glu Gly Gln Glu Gly Lys Leu Glu						
	340	345		350		
Ser Leu Gly Ile Ala His Leu Leu Ile Gln Gly Leu Gly Gly Phe Asp						
	355	360		365		
Asn Ile Thr Lys Leu Asp Val Cys Ser Thr Arg Leu His Val Asp Val						
	370	375		380		
Val Asn Thr Glu Leu Val Asp Asn Asn Leu Leu Lys Glu Ala Gly Val						
	385	390		395		400
Leu Lys Ile Gly Leu Val Asn Gly Lys Val Gln Leu Phe Tyr Gly Ser						
	405	410		415		
Asn Val Tyr Tyr Ile Lys Asn Ala Ile Asp Thr Tyr Ser Pro Lys Ser						
	420	425		430		
Leu Phe Glu Ala Ser Val Met Val Ala Val Asp Asn Val Lys Lys Gly						
	435	440		445		
Phe Lys Thr Tyr Ile Glu Met Lys Glu Asp Lys Lys Leu Glu Lys Gln						
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<210> 383

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 383

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ttaacattta atattactga aaattatttt attgaggctt tttcagggct tgttgaagca 180
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atgaagctac ccaaaccttt tgtgtttttt tcagagtgcc attttgtgcc tatagtaata 360
attttaccct tttgtgtttt tttggctata tttttttgtt tgatttggtc aagttttgac 420

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tttgagttta	cttctttggg	aggagtggag	atagttaatg	gcgatactgt	tagagggtctt	600
aagaatata	tttatgctca	gctattagac	ccatcacttg	gtaaattttc	atcagggtctt	660
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gggggtttaca	aggggtattgt	tcatagaagat	aaaaataagg	ttgcagcact	tctttttctct	780
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tctaattgtt	attatattaa	aatgccatt	gatacctatt	ctccaaagag	tctttttgaa	1380
gctagtgtta	tggttgcagt	tgataatgta	aaaaaagggt	ttaaaactta	tattgaaatg	1440
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<210> 384

<211> 1440

<212> DNA

<213> Homo sapiens

<400> 384

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gttgggcgta	taaatttttt	tgggtgtcaa	actttaaata	cgggaattgc	aggttcttta	180
gcggtaggcc	ttttagttgg	atatttgcac	aacaaatttt	ataatatgaa	gctacccaaa	240
ccttttgtgt	ttttttcaga	gtgccatttt	gtgcctatag	taataatttt	acccttttgt	300
gttttttttg	ctatatattt	ttgtttgatt	tgggtcaagtt	ttgacgattt	aattgcatct	360
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ggattttatc	tatctattat	gtttggactg	cccggagcag	cattaggggt	ttacaagggt	660
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<210> 385

<211> 454

<212> PRT

<213> Homo sapiens

<400> 385

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 20 25 30
 Asp Lys Tyr Tyr Phe Glu Ile Leu Asn Asp Gly Phe Gly Phe Ser Leu
 35 40 45
 Ser Asp Phe Phe Asp Asp Leu Arg Ser Gly Ser Leu Ile Phe Thr Tyr
 50 55 60
 Val Ser Lys Tyr Asn Phe Ile Ile Asn Leu Glu Ala His Met Leu Thr
 65 70 75 80
 Tyr Arg Gly Tyr Lys Asp Ser Pro Lys Ser Leu Ile Ser Arg Thr Asp
 85 90 95
 Leu Ile Glu Ile Gly Phe Met Tyr Tyr Phe Pro Ile Leu Leu Leu Ile
 100 105 110
 Asn Gly Lys Asn Phe Gly Glu Ile Asp Leu Gly Ile Gly Val Lys Asn
 115 120 125
 Leu Leu Phe Gly Asp Trp Gly Gly His Leu Met Gln Ser Ile Ile His
 130 135 140
 Leu Ile Leu Asn Gln His Arg Pro Ile Pro Ser Ile Lys Ser Tyr Asp
 145 150 155 160
 Ser Tyr Asn Tyr Arg Gly Phe Leu Ser Phe Ala Leu Asn Tyr Ser Tyr
 165 170 175
 Met Asn Phe Leu Asn Leu Glu Asn Tyr Met Asp Leu Ser Tyr Phe Ala
 180 185 190
 Asp Tyr Phe Ile Lys Asn Ser Ile Gly Ile Thr Leu Lys Asn Glu Asn
 195 200 205
 Ile Gly Phe Asp Ile Lys Leu Tyr Ser Gln Ile Gln Asn Gln Ile Lys
 210 215 220
 Ser Leu Lys Thr Tyr Ser Lys Thr Gln Glu Ala Glu Thr Gly Ile Gly
 225 230 235 240
 Ile Asn Tyr Gln Phe Tyr Ser Lys Asn Phe Phe Ile Thr Asn Asn Leu
 245 250 255
 Asn Ile Lys Asn Phe Ser Thr Lys Glu Asn Phe Leu Ser Val Gly Gly
 260 265 270
 Phe Gly Ile Ile Ile Thr Pro Glu Glu Tyr Lys Lys Ile Ser Glu Ser
 275 280 285
 Asn Asn Glu Phe Asn Val Ile Ser Asn Asn Phe Tyr Phe Gly Phe Asp
 290 295 300
 Ile Met Ile Pro Leu Lys Ile Arg Asn Ser Leu Phe Tyr Lys Ile Asn
 305 310 315 320
 Glu Asn Ile Asn His Tyr Phe Ser Ile Ser Thr Asn Tyr Tyr Thr Asn
 325 330 335

Tyr Asn Glu Thr Asn Ser Phe Thr Asn Gln Leu Ser Ser Gly Ile Met
 340 345 350
 Tyr Glu Phe Leu Pro Gln Lys Thr Phe Asn Pro Tyr Leu Ile Ser Gly
 355 360 365
 Leu Phe Phe Ala Tyr Asn Gln Asn Asn Lys Asp Ile Lys Ser Ile Ser
 370 375 380
 Arg Pro Ile Arg Ile Lys Asn Ile Leu Gln Val Gly Ile Glu Asn Glu
 385 390 395 400
 Leu Gly Phe Leu Phe Lys Met Leu Lys Tyr Arg Asn Thr Glu Tyr Ile
 405 410 415
 Phe Lys Ile Tyr Ser Lys Val Asn Tyr Ile Pro Ile Ala Tyr Asn Leu
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 435 440 445
 Ile Gly Ile Val Val Lys
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 <210> 386
 <211> 436
 <212> PRT
 <213> Homo sapiens
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 35 40 45
 Lys Tyr Asn Phe Ile Ile Asn Leu Glu Ala His Met Leu Thr Tyr Arg
 50 55 60
 Gly Tyr Lys Asp Ser Pro Lys Ser Leu Ile Ser Arg Thr Asp Leu Ile
 65 70 75 80
 Glu Ile Gly Phe Met Tyr Tyr Phe Pro Ile Leu Leu Leu Ile Asn Gly
 85 90 95
 Lys Asn Phe Gly Glu Ile Asp Leu Gly Ile Gly Val Lys Asn Leu Leu
 100 105 110
 Phe Gly Asp Trp Gly Gly His Leu Met Gln Ser Ile Ile His Leu Ile
 115 120 125
 Leu Asn Gln His Arg Pro Ile Pro Ser Ile Lys Ser Tyr Asp Ser Tyr
 130 135 140
 Asn Tyr Arg Gly Phe Leu Ser Phe Ala Leu Asn Tyr Ser Tyr Met Asn
 145 150 155 160

Phe Leu Asn Leu Glu Asn Tyr Met Asp Leu Ser Tyr Phe Ala Asp Tyr
 165 170 175
 Phe Ile Lys Asn Ser Ile Gly Ile Thr Leu Lys Asn Glu Asn Ile Gly
 180 185 190
 Phe Asp Ile Lys Leu Tyr Ser Gln Ile Gln Asn Gln Ile Lys Ser Leu
 195 200 205
 Lys Thr Tyr Ser Lys Thr Gln Glu Ala Glu Thr Gly Ile Gly Ile Asn
 210 215 220
 Tyr Gln Phe Tyr Ser Lys Asn Phe Phe Ile Thr Asn Asn Leu Asn Ile
 225 230 235 240
 Lys Asn Phe Ser Thr Lys Glu Asn Phe Leu Ser Val Gly Gly Phe Gly
 245 250 255
 Ile Ile Ile Thr Pro Glu Glu Tyr Lys Lys Ile Ser Glu Ser Asn Asn
 260 265 270
 Glu Phe Asn Val Ile Ser Asn Asn Phe Tyr Phe Gly Phe Asp Ile Met
 275 280 285
 Ile Pro Leu Lys Ile Arg Asn Ser Leu Phe Tyr Lys Ile Asn Glu Asn
 290 295 300
 Ile Asn His Tyr Phe Ser Ile Ser Thr Asn Tyr Tyr Thr Asn Tyr Asn
 305 310 315 320
 Glu Thr Asn Ser Phe Thr Asn Gln Leu Ser Ser Gly Ile Met Tyr Glu
 325 330 335
 Phe Leu Pro Gln Lys Thr Phe Asn Pro Tyr Leu Ile Ser Gly Leu Phe
 340 345 350
 Phe Ala Tyr Asn Gln Asn Asn Lys Asp Ile Lys Ser Ile Ser Arg Pro
 355 360 365
 Ile Arg Ile Lys Asn Ile Leu Gln Val Gly Ile Glu Asn Glu Leu Gly
 370 375 380
 Phe Leu Phe Lys Met Leu Lys Tyr Arg Asn Thr Glu Tyr Ile Phe Lys
 385 390 395 400
 Ile Tyr Ser Lys Val Asn Tyr Ile Pro Ile Ala Tyr Asn Leu Asp Glu
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 Lys Lys Leu Glu Lys His Ser Ile Asn Phe Asn Tyr Leu Gly Ile Gly
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 Ile Val Val Lys
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<210> 387
 <211> 1365
 <212> DNA
 <213> Homo sapiens

<400> 387

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ggaattacct	taaaaaatga	aaatattgga	tttgatataa	aactttattc	ccaaattcaa	660
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tcaaaagtta	actatatctc	tatagcttat	aacttagatg	aaaaaaaatt	agaaaaacat	1320
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<210> 388

<211> 1311

<212> DNA

<213> Homo sapiens

<400> 388

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tttttaaaat	tagaaaatta	tatggactta	tcttattttg	cagattattt	tattaaaaaac	540
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attggaataa	attatcaatt	ttactctaaa	aatttttttca	taaccaataa	tttaaacatt	720
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gaaactaata	gctttacaaa	tcaattatca	tcaggcatca	tgtatgaatt	tttaccacaa	1020
aaaacattca	atccttacct	aatttcggga	ttattttttg	cctataatca	aaacaataaa	1080
gatatcaaaa	gcattctcaag	accaataaga	ataaaaaaca	ttcttcaagt	tggaattgaa	1140
aatgaattag	gattttttgtt	caaaatgcta	aaataccgca	acactgagta	tatttttcaa	1200
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<210> 389

<211> 336

<212> PRT

<213> Homo sapiens

<400> 389

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Glu Ile Ile Thr Lys Thr Gly Phe Asp Ser Lys Val Asp Ile Phe Lys	35	40	45
Lys Thr Gln Gly Arg Asp Leu Thr Asp Ala Glu Lys Lys Gln Val Leu	50	55	60
Gln Val Leu Ile Ala Asp Val Leu Phe Ser Gln Glu Ala Ser Lys Gln	65	70	75
Gly Ile Lys Ile Ser Asp Asp Glu Val Met Gln Thr Ile Arg Thr Gln	85	90	95
Phe Gly Leu Val Asn Phe Thr Asp Glu Gln Ile Lys Gln Met Ile Glu	100	105	110
Lys Gln Gly Thr Asn Trp Gly Glu Leu Leu Ser Ser Met Lys Arg Ser	115	120	125
Leu Ser Ser Gln Lys Leu Val Leu Lys Gln Ala Gln Pro Lys Phe Ser	130	135	140
Glu Ile Lys Thr Pro Ser Glu Lys Glu Ile Val Glu Tyr Tyr Glu Ala	145	150	155
Asn Lys Thr Lys Phe Val Asn Pro Asp Ile Ser Arg Val Ser His Ile	165	170	175
Phe Phe Ser Thr Lys Asp Lys Lys Arg Ser Asp Val Leu Asp Gln Ala	180	185	190
Lys Asn Ile Leu Ser Gln Ile Arg Ser Lys Lys Ile Thr Phe Glu Glu	195	200	205
Ala Val Arg Lys Tyr Ser Asn Asp Glu Ser Ser Lys Ala Lys Asn Gly	210	215	220
Asp Leu Gly Phe Leu Ser Arg Gly Asp Gln Asn Ala Gln Asn Leu Leu	225	230	235
Gly Ala Asp Phe Val Lys Glu Val Phe Asn Phe Asn Lys Gly Asp Ile	245	250	255
Ser Ser Pro Ile Ala Ser Lys Glu Gly Phe His Ile Val Lys Val Thr	260	265	270
Glu Lys Tyr Ala Gln Arg Phe Leu Gly Leu Asn Asp Lys Val Ser Pro	275	280	285
Thr Ala Asp Leu Ile Val Lys Asp Ala Ile Arg Asn Asn Met Ile Asn	290	295	300
Val Gln Gln Gln Gln Ile Val Val Gln Val Gln Gln Asp Met Tyr Gly	305	310	315
Lys Leu Asn Lys Ser Ala Asn Ile Gln Ile Leu Asp Ser Ser Leu Lys			

325

330

335

<210> 390

<211> 317

<212> PRT

<213> Homo sapiens

<400> 390

Gln Asn Thr Pro Val Ala Ile Ile Asn Leu Tyr Lys Asn Glu Ile Ile
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Thr Lys Thr Gly Phe Asp Ser Lys Val Asp Ile Phe Lys Lys Thr Gln
 20 25 30

Gly Arg Asp Leu Thr Asp Ala Glu Lys Lys Gln Val Leu Gln Val Leu
 35 40 45

Ile Ala Asp Val Leu Phe Ser Gln Glu Ala Ser Lys Gln Gly Ile Lys
 50 55 60

Ile Ser Asp Asp Glu Val Met Gln Thr Ile Arg Thr Gln Phe Gly Leu
 65 70 75 80

Val Asn Phe Thr Asp Glu Gln Ile Lys Gln Met Ile Glu Lys Gln Gly
 85 90 95

Thr Asn Trp Gly Glu Leu Leu Ser Ser Met Lys Arg Ser Leu Ser Ser
 100 105 110

Gln Lys Leu Val Leu Lys Gln Ala Gln Pro Lys Phe Ser Glu Ile Lys
 115 120 125

Thr Pro Ser Glu Lys Glu Ile Val Glu Tyr Tyr Glu Ala Asn Lys Thr
 130 135 140

Lys Phe Val Asn Pro Asp Ile Ser Arg Val Ser His Ile Phe Phe Ser
 145 150 155 160

Thr Lys Asp Lys Lys Arg Ser Asp Val Leu Asp Gln Ala Lys Asn Ile
 165 170 175

Leu Ser Gln Ile Arg Ser Lys Lys Ile Thr Phe Glu Glu Ala Val Arg
 180 185 190

Lys Tyr Ser Asn Asp Glu Ser Ser Lys Ala Lys Asn Gly Asp Leu Gly
 195 200 205

Phe Leu Ser Arg Gly Asp Gln Asn Ala Gln Asn Leu Leu Gly Ala Asp
 210 215 220

Phe Val Lys Glu Val Phe Asn Phe Asn Lys Gly Asp Ile Ser Ser Pro
 225 230 235 240

Ile Ala Ser Lys Glu Gly Phe His Ile Val Lys Val Thr Glu Lys Tyr
 245 250 255

Ala Gln Arg Phe Leu Gly Leu Asn Asp Lys Val Ser Pro Thr Ala Asp
 260 265 270

Leu Ile Val Lys Asp Ala Ile Arg Asn Asn Met Ile Asn Val Gln Gln

275

280

285

Gln Gln Ile Val Val Gln Val Gln Gln Asp Met Tyr Gly Lys Leu Asn
 290 295 300

Lys Ser Ala Asn Ile Gln Ile Leu Asp Ser Ser Leu Lys
 305 310 315

<210> 391

<211> 1011

<212> DNA

<213> Homo sapiens

<400> 391

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gattctaagg ttgatataat taaaaagacc caaggtagag acttaactga tgctgagaaa 180
aagcaagttc tgcaagtttt aatagcagat gttcttttta gtcaagaggc ttcaaagcaa 240
ggaattaaaa tctcagatga tgaggttatg caaacaatta gaactcaatt tgggcttggt 300
aattttactg atgaacaaat caagcaaagt atagaaaaac aaggtaacaa ttggggcgag 360
cttttgtctt caatgaaaag atctctgtct tctcaaaagc ttgttttaaa gcaagctcag 420
cctaagtttt ctgaaattaa aactcctagt gagaaagaaa ttgttgagta ttatgaggct 480
aataaaacta agtttgtaaa tcccgatatt tcaagagtta gtcatatctt tttttctact 540
aaagataaaa aaagatcaga tgttttagat caagcaaaaa atattttaag ccaaataaga 600
tcaaaaaaaa ttacttttga agaagctgta agaaaatatt caaatgacga atcttctaag 660
gctaaaaatg gtgatcttgg gtttttatca agaggtgatc aaaatgctca aaatcttctt 720
ggagccgatt ttgtgaaaaga gttttttaat ttaataaagg gtgatataat ttcgcctatt 780
gcttcaaagg aagggtttca tattgttaaa gttacagaaa aatatgctca gagattttta 840
ggtttgaatg ataaagtgtc tcctactgca gatttgattg tcaaagatgc aataagaaat 900
aacatgatta atgttcaaca acagcaaatt gttgttcaag tacagcaaga tatgtatggg 960
aagcttaaca agtctgcaaa tatacaaatt ttggattcta gtctaaaata a 1011

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<210> 392

<211> 954

<212> DNA

<213> Homo sapiens

<400> 392

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aaaaagcaag ttctgcaagt tttaatagca gatgttcttt ttagtcaaga ggcttcaaag 180
caaggaatta aaatctcaga tgatgaggtt atgcaaacaa ttagaactca atttgggctt 240
gtgaatttta ctgatgaaca aatcaagcaa atgatagaaa aacaagggtac aaattggggc 300
gagcttttgt cttcaatgaa aagatctctg tcttctcaa agcttgtttt aaagcaagct 360
cagcctaagt tttctgaaat taaaactcct agtgagaaaag aaattggtga gtattatgag 420
gctaataaaa ctaagtttgt aaatcccgat atttcaagag ttagtcatat ctttttttct 480
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cttgagcccg attttgtgaa agaggttttt aattttaata aggggtgatat atcttcgcct 720
attgcttcaa aggaagggtt tcatattgtt aaagttacag aaaaatatgc tcagagattt 780
ttaggtttga atgataaagt gtctcctact gcagatttga ttgtcaaaga tgcaataaga 840
aataacatga ttaatgttca acaacagcaa attgttgttc aagtacagca agatatgtat 900
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<210> 393

<211> 173

<212> PRT

<213> Homo sapiens

<400> 393

Met Lys Leu Pro Lys Leu Tyr Lys Leu Ile Leu Leu Phe Leu Phe Thr
1 5 10 15

Thr Arg Leu Phe Ser Val Lys Asp Glu Lys Ser Asp Asn Lys Leu Glu
20 25 30

Leu Phe Ser Asn Val Glu Thr Lys Ile Lys Lys Asn Ser Lys Asn Tyr
35 40 45

Asp Ser Asn Ser Asn Ser Lys Lys Ile Lys Lys Glu Ser Ile Leu Lys
50 55 60

Arg Asp Thr Asn Ser Glu Lys Asn Ile Asn Ser Asn Ile Tyr Ile Gln
65 70 75 80

Lys Ser Lys Lys Ile Asn Tyr Pro Asn Arg Asn Leu Gly Asn Asn Ile
85 90 95

Asn Gln Lys Thr Ala Asn Asp Val Asn Phe Thr Lys Thr Ser Tyr Val
100 105 110

Lys Val Tyr Pro Asn Tyr Lys Asp Asp Asn Phe Gln Glu Ile Lys Asn
115 120 125

Ala Asn Lys Phe Pro Ala Lys Thr Glu Lys Thr His Met Leu Ile Gly
130 135 140

Pro Ile Leu Lys Asp Asn Leu Gly Ile Ile Ile Lys Met Leu Lys Thr
145 150 155 160

Lys Gly Tyr Thr Leu Ile Glu Tyr Ile Glu Asp Asn Asn
165 170

<210> 394

<211> 80

<212> PRT

<213> Homo sapiens

<400> 394

Val Lys Asp Glu Lys Ser Asp Asn Lys Leu Glu Leu Phe Ser Asn Val
1 5 10 15

Glu Thr Lys Ile Lys Lys Asn Ser Lys Asn Tyr Asp Ser Asn Ser Asn
20 25 30

Ser Lys Lys Ile Lys Lys Glu Ser Ile Leu Lys Arg Asp Thr Asn Ser
35 40 45

Glu Lys Asn Ile Asn Ser Asn Ile Tyr Ile Gln Lys Ser Lys Lys Ile
50 55 60

Asn Tyr Pro Asn Arg Asn Leu Gly Asn Asn Ile Asn Gln Lys Thr Ala
65 70 75 80

<210> 395

<211> 522

<212> DNA

<213> Homo sapiens

<400> 395
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atcaaaaaaa attctaaaaa ttacgactca aattcaaaca gcaaaaagat caaaaaagaa 180
tcaattttta aaagagatac aaacagcgaa aaaaatataa attccaatat atacatacaa 240
aaatcaaaaa aaattaatta ccccaacaga aatttaggca ataatatcaa tcaaaaaact 300
gcaaatgatg taaattttac aaaaactagt tatgttaaag tttatcccaa ctataaagac 360
gataactttc aagaaattaa aaatgctaataa aaatttccag ctaaaaccga aaaaactcac 420
atgctaatacg gcccaatatt aaaagataat ctaggaataa taattaaaaat gctaaaaaca 480
aagggatata ctttaataga atacatagag gacaataatt aa 522

<210> 396
<211> 459
<212> DNA
<213> Homo sapiens

<400> 396
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aaaaaaaatt ctaaaaatta cgactcaaatt tcaaacagca aaaagatcaa aaaagaatca 120
attttaaaaa gagatacaaa cagcgaaaaa aatataaatt ccaatatata catacaaaaa 180
tcaaaaaaaa ttaattaccc caacagaaat ttaggcaata atatcaatca aaaaactgca 240
aatgatgtaa attttaca aaactagttat gttaaagttt atcccaacta taaagacgat 300
aaactttcaag aaattaaaaa tgctaataaaa tttccagcta aaaccgaaaa aactcacatg 360
ctaactggcc caatattaaa agataatcta ggaataataa ttaaaatgct aaaaacaaag 420
ggatacactt taatagaata catagaggac aataattaa 459

<210> 397
<211> 261
<212> PRT
<213> Homo sapiens

<400> 397
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Gly Leu Ser Tyr Phe Lys Tyr Ile Lys Ser Arg Ile Gly Gly Cys Gln
20 25 30
Tyr Val Tyr Val Ala Asp Asn Lys Asn Phe Pro Tyr Gly Glu Lys Ser
35 40 45
Pro Glu Tyr Leu Leu Glu Ala Val Leu Phe Leu Ile Glu Lys Leu Lys
50 55 60
Lys Ile Tyr Asn Ile Gly Ala Leu Val Leu Ala Cys Asn Thr Ile Ser
65 70 75 80
Val Ser Val Tyr Asn Lys Leu Asn Phe Val Phe Pro Val Val Tyr Thr
85 90 95
Leu Pro Asp Val Ser Ser Val Ser Asp Leu Val Leu Lys Arg Val Leu
100 105 110
Leu Ile Ala Thr Asn Thr Thr Leu Glu Ser Lys Phe Val Lys Asp Gln
115 120 125
Val Asn Ile His Asn Asp Leu Ile Val Lys Ala Ala Gly Glu Leu Val
130 135 140
Asn Phe Val Glu Tyr Gly Glu Asn Tyr Lys Lys Tyr Ala Leu Arg Cys

145 150 155 160
 Leu Glu Ala Leu Lys Phe Glu Val Val Asn Thr Gly Arg Glu Ile Val
 165 170 175
 Phe Leu Gly Cys Thr His Tyr Leu His Leu Lys Val Met Ile Glu Asp
 180 185 190
 Phe Leu Lys Ile Pro Val Tyr Glu Asn Arg Glu Leu Val Val Lys Asn
 195 200 205
 Leu Ile Arg Ser Met Asn Phe Ser Glu His Lys Gly Asn Tyr Tyr Lys
 210 215 220
 Asn Asp Phe Asp Phe Val Asp Asp Glu Phe Tyr Leu Thr Glu Asn Lys
 225 230 235 240
 Asn Leu Thr Phe Tyr Gln Asn Phe Cys Lys Lys Tyr Asn Leu Arg Phe
 245 250 255
 Lys Gly Met Ile Val
 260

<210> 398

<211> 235

<212> PRT

<213> Homo sapiens

<400> 398

Arg Ile Gly Gly Cys Gln Tyr Val Tyr Val Ala Asp Asn Lys Asn Phe
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Pro Tyr Gly Glu Lys Ser Pro Glu Tyr Leu Leu Glu Ala Val Leu Phe
 20 25 30

Leu Ile Glu Lys Leu Lys Lys Ile Tyr Asn Ile Gly Ala Leu Val Leu
 35 40 45

Ala Cys Asn Thr Ile Ser Val Ser Val Tyr Asn Lys Leu Asn Phe Val
 50 55 60

Phe Pro Val Val Tyr Thr Leu Pro Asp Val Ser Ser Val Ser Asp Leu
 65 70 75 80

Val Leu Lys Arg Val Leu Leu Ile Ala Thr Asn Thr Thr Leu Glu Ser
 85 90 95

Lys Phe Val Lys Asp Gln Val Asn Ile His Asn Asp Leu Ile Val Lys
 100 105 110

Ala Ala Gly Glu Leu Val Asn Phe Val Glu Tyr Gly Glu Asn Tyr Lys
 115 120 125

Lys Tyr Ala Leu Arg Cys Leu Glu Ala Leu Lys Phe Glu Val Val Asn
 130 135 140

Thr Gly Arg Glu Ile Val Phe Leu Gly Cys Thr His Tyr Leu His Leu
 145 150 155 160

Lys Val Met Ile Glu Asp Phe Leu Lys Ile Pro Val Tyr Glu Asn Arg

165

170

175

Glu Leu Val Val Lys Asn Leu Ile Arg Ser Met Asn Phe Ser Glu His
 180 185 190

Lys Gly Asn Tyr Tyr Lys Asn Asp Phe Asp Phe Val Asp Asp Glu Phe
 195 200 205

Tyr Leu Thr Glu Asn Lys Asn Leu Thr Phe Tyr Gln Asn Phe Cys Lys
 210 215 220

Lys Tyr Asn Leu Arg Phe Lys Gly Met Ile Val
 225 230 235

<210> 399

<211> 786

<212> DNA

<213> Homo sapiens

<400> 399

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 aatttccctt atggagaaaa aagtcctgaa tatcttctag aagcagtttt gtttttgatt 180
 gagaagctta aaaaaatcta taatattggt gcattagttt tggcttgtaa tacaatttct 240
 gttagtgtat acaataaatt aaattttggt tttccagtag tctatacttt gccagatgta 300
 agttcagttt cagatcttgt tttaaaaaga gttcttttga ttgcaacaaa tactactctt 360
 gaaagcaaat ttgttaagga tcaagtaa atacataatg atttgattgt aaaagctgct 420
 ggagagcttg ttaattttgt tgaatatgga gagaattaca aaaaatatgc tcttagatgt 480
 ttagaagctt taaaatttga agttgtaaat actggtagag aaattgtttt tcttgatgct 540
 acgcattatt tgcattctaa ggtaattgata gaagattttt taaaaattcc tgtttatgag 600
 aatcgtgaat tagtggttaa aaatcttatt agatcaatga atttttctga acacaaaggt 660
 aattattata agaattgatt tgatttttga gatgatgagt tttatttgac cgaaaataaa 720
 aatttgactt tttatcaaaa tttttgcaaa aaatataatc ttcgctttaa ggggaatgata 780
 gtttga 786

<210> 400

<211> 708

<212> DNA

<213> Homo sapiens

<400> 400

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 tataatattg gtgcattagt tttggcttgt aatacaattt ctgttagtgt atacaataaa 180
 ttaaattttg tttttccagt agtctatact ttgccagatg taagttcagt ttcagatctt 240
 gttttaaaaa gagttctttt gattgcaaca aatactactc ttgaaagcaa atttgtaag 300
 gatcaagtaa atatacataa tgatttgatt gtaaaagctg ctggagagct tgtaattttt 360
 gttgaatatg gagagaatta caaaaaatat gctcttagat gtttagaagc tttaaaattt 420
 gaagttgtaa atactggtag agaaattggt tttcttggat gcacgcatta tttgcatctt 480
 aaggtaatga tagaagattt tttaaaaatt cctgtttatg agaatcgtga attagtggta 540
 aaaaatctta ttgatcaat gaatttttct gaacacaaag gtaattatta taagaatgat 600
 tttgattttg tagatgatga gttttatttg accgaaaata aaaatttgac tttttatcaa 660
 aatttttgca aaaaatataa tcttcgcttt aagggaatga tagtttga 708

<210> 401

<211> 216

<212> PRT

<213> Homo sapiens

<400> 401

Met Ile Arg Leu Lys Val Leu Ile Leu Cys Leu Phe Gly Ile Phe Val
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 20 25 30
 Val Ala Phe Pro Val Ser Pro Phe Ser Ser Phe Tyr Asn Glu Ala Leu
 35 40 45
 Glu Ile Asn Ala Lys Leu Lys Gln Asn Leu Pro Ser Asp Leu Ser Pro
 50 55 60
 Ile Glu Lys Glu Glu Ile Val Gln Asn Phe Ser Asp Leu Ala Asn Ile
 65 70 75 80
 Ala Lys Ala Gly Ile Arg Tyr Gly Thr Tyr Ala Gln Phe Gly Ala Lys
 85 90 95
 Phe Asp Asp Phe Val Ser Ile Gly Phe Glu Leu Leu Phe Asn Ile Asn
 100 105 110
 Leu Leu Lys Ala Ile Lys Arg Ser Asp Gly Thr Ala Asn Glu Asn Phe
 115 120 125
 Ser Phe Ile Met Ala Ile Thr Pro Arg Phe Tyr Thr Lys Leu Asp Phe
 130 135 140
 Phe Val Leu Ala Leu Ala Phe Phe Thr Gly Pro Lys Ile Asn Ile Ala
 145 150 155 160
 Thr Ser Ser Ala Asp Ser Val Leu Ala Glu Leu Gly Thr Met Gly Trp
 165 170 175
 Asp Ile Gly Ala Arg Leu Ser Phe Ser Phe Leu Ile Leu Glu Gly Tyr
 180 185 190
 Tyr Val Trp Asn Ile Lys Asn Pro Lys Phe Ser Asp Phe Lys Phe Gly
 195 200 205
 Ile Gly Phe Glu Phe Gly Ile Val
 210 215

<210> 402
 <211> 195
 <212> PRT
 <213> Homo sapiens

<400> 402
 Asp Thr Asn Phe Glu Phe Asn Phe Gly Gly Gly Val Ala Phe Pro Val
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 Ser Pro Phe Ser Ser Phe Tyr Asn Glu Ala Leu Glu Ile Asn Ala Lys
 20 25 30
 Leu Lys Gln Asn Leu Pro Ser Asp Leu Ser Pro Ile Glu Lys Glu Glu
 35 40 45
 Ile Val Gln Asn Phe Ser Asp Leu Ala Asn Ile Ala Lys Ala Gly Ile
 50 55 60

Arg Tyr Gly Thr Tyr Ala Gln Phe Gly Ala Lys Phe Asp Asp Phe Val
 65 70 75 80
 Ser Ile Gly Phe Glu Leu Leu Phe Asn Ile Asn Leu Leu Lys Ala Ile
 85 90 95
 Lys Arg Ser Asp Gly Thr Ala Asn Glu Asn Phe Ser Phe Ile Met Ala
 100 105 110
 Ile Thr Pro Arg Phe Tyr Thr Lys Leu Asp Phe Phe Val Leu Ala Leu
 115 120 125
 Ala Phe Phe Thr Gly Pro Lys Ile Asn Ile Ala Thr Ser Ser Ala Asp
 130 135 140
 Ser Val Leu Ala Glu Leu Gly Thr Met Gly Trp Asp Ile Gly Ala Arg
 145 150 155 160
 Leu Ser Phe Ser Phe Leu Ile Leu Glu Gly Tyr Tyr Val Trp Asn Ile
 165 170 175
 Lys Asn Pro Lys Phe Ser Asp Phe Lys Phe Gly Ile Gly Phe Glu Phe
 180 185 190
 Gly Ile Val
 195

<210> 403
 <211> 651
 <212> DNA
 <213> Homo sapiens

<400> 403
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 tcaagctttt acaatgaggc tttagagatt aatgcaaagc ttaagcaaaa tttgccttca 180
 gatttatccc caatagaaaa agaagagata gtccaaaatt tttccgattt agccaatatt 240
 gctaaagctg gaataagata tggaacttac gctcaatttg gcgctaaatt tgatgatttt 300
 gtttctattg gatttgagct tttgtttaac attaattctt ttaaagcaat aaagcggttcg 360
 gatggaaactg caaatgaaaa tttctcgttt attatggcaa taacaccaag attttataca 420
 aaattagatt tttttgtttt agcttttagcg tttttcacag gtcctaagat caatatagcg 480
 acttcttctg cggattctgt ttttagcagaa ctgggaacaa tgggctggga tattgggtgct 540
 agactttcat tttctttttt aattcttgaa gggactatg tttggaatat taaaaacctt 600
 aaattttctg atttcaagtt tggaataggt ttgaatttg gaattgtgta g 651

<210> 404
 <211> 588
 <212> DNA
 <213> Homo sapiens

<400> 404
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 ttatccccaa tagaaaaaga agagatagtc caaaattttt ccgatttagc caatattgct 180
 aaagctggaa taagatatgg aacttacgct caatttggcg cttaaatttg tgattttgtt 240
 tctattggat ttgagctttt gtttaacatt aatcttctta aagcaataaa gcgttcggat 300
 ggaactgcaa atgaaaattt ctcgtttatt atggcaataa caccaagatt ttatacaaaa 360
 ttagattttt ttgttttagc ttttagcggtt ttcacaggct ctaagatcaa tatagcgact 420
 tcttctgctg attctgtttt agcagaactg ggaacaatgg gctgggatat tgggtgctaga 480
 ctttcatttt ctcttttaatt tcttgaaggg tactatgttt ggaatattaa aaaccctaaa 540

ttttctgatt tcaagtttgg aataggtttt gaatttggaa ttgtgtag

588

<210> 405

<211> 232

<212> PRT

<213> Homo sapiens

<400> 405

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Ala Val Phe Ala Tyr Ala Thr Ser Glu Asn Gln Thr Ile Lys Ala Ile
35 40 45

Ile Phe Ser Asn Ser Met Ser Phe Met Ala Met Ile Leu Ile Gln Phe
50 55 60

Gly Leu Val Tyr Ala Ile Ser Gly Ala Leu Asn Lys Ile Ser Ser Asn
65 70 75 80

Thr Ala Thr Ala Leu Phe Leu Leu Tyr Ser Ala Leu Thr Gly Val Thr
85 90 95

Leu Ser Ser Ile Phe Met Ile Tyr Thr Gln Gly Ser Ile Val Phe Thr
100 105 110

Phe Gly Ile Thr Ala Gly Thr Phe Leu Gly Met Ser Val Tyr Gly Tyr
115 120 125

Thr Thr Thr Thr Asp Leu Thr Lys Met Gly Ser Tyr Leu Ile Met Gly
130 135 140

Leu Trp Gly Ile Ile Ile Ala Ser Leu Val Asn Met Phe Phe Arg Ser
145 150 155 160

Ser Gly Leu Asn Phe Leu Ile Ser Ile Leu Gly Val Val Ile Phe Thr
165 170 175

Gly Leu Thr Ala Tyr Asp Val Gln Asn Ile Ser Lys Met Asp Lys Met
180 185 190

Leu Gln Asp Asp Thr Glu Ile Lys Asn Arg Met Ala Val Val Ala Ser
195 200 205

Leu Lys Leu Tyr Leu Asp Phe Ile Asn Leu Phe Leu Tyr Leu Leu Arg
210 215 220

Phe Leu Gly Gln Arg Arg Asn Asp
225 230

<210> 406

<211> 194

<212> PRT

<213> Homo sapiens

<400> 406

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	20	25	30
Ser Gly Ala Leu Asn Lys Ile Ser Ser Asn Thr Ala Thr Ala Leu Phe			
	35	40	45
Leu Leu Tyr Ser Ala Leu Thr Gly Val Thr Leu Ser Ser Ile Phe Met			
	50	55	60
Ile Tyr Thr Gln Gly Ser Ile Val Phe Thr Phe Gly Ile Thr Ala Gly			
	65	70	75
Thr Phe Leu Gly Met Ser Val Tyr Gly Tyr Thr Thr Thr Thr Asp Leu			
	85	90	95
Thr Lys Met Gly Ser Tyr Leu Ile Met Gly Leu Trp Gly Ile Ile Ile			
	100	105	110
Ala Ser Leu Val Asn Met Phe Phe Arg Ser Ser Gly Leu Asn Phe Leu			
	115	120	125
Ile Ser Ile Leu Gly Val Val Ile Phe Thr Gly Leu Thr Ala Tyr Asp			
	130	135	140
Val Gln Asn Ile Ser Lys Met Asp Lys Met Leu Gln Asp Asp Thr Glu			
	145	150	155
Ile Lys Asn Arg Met Ala Val Val Ala Ser Leu Lys Leu Tyr Leu Asp			
	165	170	175
Phe Ile Asn Leu Phe Leu Tyr Leu Leu Arg Phe Leu Gly Gln Arg Arg			
	180	185	190

Asn Asp

<210> 407

<211> 699

<212> DNA

<213> Homo sapiens

<400> 407

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gaaaatcaaa caatcaaagc aataatattc tcaaattcaa tgtcatttat ggctatgata 180
cttatacaat ttggacttgt atatgcaata agtgggtgctc ttaataaaaat atcaagcaat 240
actgcaacag ctcttttctt gctctactca gcactaacag gagtaacatt atcttctata 300
tttatgattt acacacaagg atcaatagta ttcacattcg gaattactgc tggaacattt 360
cttggaatgt ctgtttatgg atacactaca acaacagatc taacaaaaat ggggaagctat 420
ttaataatgg gcttatgggg aatcattatt gcattctctt ttaatatggt ttttagaagc 480
tcagggtcta atttccttat atctattttg ggcgtagtta tatttacagg cttaacagct 540
tatgatgttc aaaatatttc taaaatggac aaaatgctac aagacgacac tgaaataaaa 600
aacagaatgg cggtttagc ctcacttaaa ctttatttag attttataaa tttattctta 660
tatcttctaa gatctttggg ccaaagaaga aacgattaa 699

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<210> 408

<211> 585

<212> DNA

<213> Homo sapiens

<400> 408

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acctcagaaa atcaaacaat caaagcaata atattctcaa attcaatgtc atttatggct 60
atgataactta tacaatttgg acttggtatat gcaataaagtg gtgctcttaa taaaatatca 120
agcaataactg caacagctct tttcttgctc tactcagcac taacaggagt aacattatct 180
tctatatttta tgatttacac acaaggatca atagtattca cattcggaat tactgctgga 240
acatttcttg gaatgtctgt ttatggatac actacaacaa cagatctaac aaaaatggga 300
agctatttaa taatgggctt atggggaatc attattgcat ctcttggtta tatgtttttt 360
agaagctcag gtcttaattt ccttatatct attttgggcy tagttatatt tacaggctta 420
acagcttatg atgttcaaaa tatttctaaa atggacaaaa tgctacaaga cgacactgaa 480
ataaaaaaca gaatggcggt tgtagcctca cttaaaacttt atttagattt tataaattta 540
ttcttatatc ttctaagatt tttgggccaa agaagaaacg attaa 585
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<210> 409

<211> 214

<212> PRT

<213> Homo sapiens

<400> 409

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Met Lys Phe Phe Phe Leu Leu Gln Ile Ala Leu Ile Leu Leu Ser Asn
  1             5             10             15
```

```
Ser Ser Leu Leu Phe Gly Gln Ser Pro Pro Lys Glu Lys Glu Asp Ser
             20             25             30
```

```
Leu Leu Leu Tyr Lys Glu Gly Lys Phe Lys Glu Ala Ile Leu Asn Thr
  35             40             45
```

```
Leu Glu Glu Ile Arg Leu Asn Pro Ser Asn Leu Asp Ala Arg Thr Ile
  50             55             60
```

```
Leu Ile Trp Ser Leu Ile Ala Ile Gly Glu Tyr Lys Arg Ala Glu Lys
  65             70             75             80
```

```
Glu Ala Ile Ile Gly Leu Gly Ile Lys Lys His Asp Ile Arg Ile Ile
             85             90             95
```

```
Gln Ala Leu Gly Glu Ala Tyr Phe Phe Gln Lys Asn Tyr Asp Asn Ala
 100             105             110
```

```
Leu Lys Tyr Phe Gln Glu Tyr Ile Ser Leu Asp Ser Lys Gly Ala Arg
 115             120             125
```

```
Ile Ile Lys Val Tyr Asn Leu Ile Ala Asp Ser Phe Tyr Glu Leu Lys
 130             135             140
```

```
Arg Tyr Asn Glu Ala Asp Phe Ala Tyr Glu His Ala Leu Arg Phe Ser
 145             150             155             160
```

```
Pro Asn Asn Gln Asn Leu Leu Ile Lys Leu Ala Arg Ser Arg Ile Asn
 165             170             175
```

```
Ala Lys Asn Lys Ile Leu Ala Glu Glu Ala Leu Ile Lys Ile Leu Thr
 180             185             190
```

```
Ile Ser Pro Asn Asn Leu Glu Ala Lys Asn Leu Leu Glu Glu Leu Lys
 195             200             205
```

Lys Ser Asn Asn Lys Pro

210

<210> 410

<211> 185

<212> PRT

<213> Homo sapiens

<400> 410

Glu Asp Ser Leu Leu Leu Tyr Lys Glu Gly Lys Phe Lys Glu Ala Ile
1 5 10 15

Leu Asn Thr Leu Glu Glu Ile Arg Leu Asn Pro Ser Asn Leu Asp Ala
20 25 30

Arg Thr Ile Leu Ile Trp Ser Leu Ile Ala Ile Gly Glu Tyr Lys Arg
35 40 45

Ala Glu Lys Glu Ala Ile Ile Gly Leu Gly Ile Lys Lys His Asp Ile
50 55 60

Arg Ile Ile Gln Ala Leu Gly Glu Ala Tyr Phe Phe Gln Lys Asn Tyr
65 70 75 80

Asp Asn Ala Leu Lys Tyr Phe Gln Glu Tyr Ile Ser Leu Asp Ser Lys
85 90 95

Gly Ala Arg Ile Ile Lys Val Tyr Asn Leu Ile Ala Asp Ser Phe Tyr
100 105 110

Glu Leu Lys Arg Tyr Asn Glu Ala Asp Phe Ala Tyr Glu His Ala Leu
115 120 125

Arg Phe Ser Pro Asn Asn Gln Asn Leu Leu Ile Lys Leu Ala Arg Ser
130 135 140

Arg Ile Asn Ala Lys Asn Lys Ile Leu Ala Glu Glu Ala Leu Ile Lys
145 150 155 160

Ile Leu Thr Ile Ser Pro Asn Asn Leu Glu Ala Lys Asn Leu Leu Glu
165 170 175

Glu Leu Lys Lys Ser Asn Asn Lys Pro
180 185

<210> 411

<211> 645

<212> DNA

<213> Homo sapiens

<400> 411

atgaaatttt tttttctatt acaaatagct ttaattctac tatccaattc aagcttggtta 60
tttggacaat caccgcctaa agaaaaagaa gactctcttc ttctatataa agaaggaaaa 120
tttaaagaag ctatttttaa cacgtagaa gaaattcgac taaatcctag taacttagat 180
gctaggacaa tattgatatg gagcttaata gccataggag aatacaagag agctgaaaaa 240
gaggcgatta taggacttgg cattaataaa catgacataa gaattattca agcactagga 300
gaagcttatt tctttcaaaa aaattatgac aatgcattaa aatactttca agaatacatt 360
agccttgatt ctaaaggagc aagaataata aaagtttata atttaattgc agattctttt 420
tatgagctaa aaagatataa tgaagccgat ttgcatatgc aacatgcatt acgtttttct 480
cctaataacc aaaatctatt aataaaaatta gcaagatcaa gaataaatgc aaaaaataaa 540
atattagcag aagaagcact aattaaaatt cttacaatct ctccataata tctagaggca 600

aaaaattttac tagaagaatt aaaaaaaagc aacaacaaac cttga

645

<210> 412

<211> 558

<212> DNA

<213> Homo sapiens

<400> 412

gaagactctc ttctttctata taaagaagga aaattttaag aagctatattt aaacacgtta 60
gaagaaattc gactaaatcc tagtaactta gatgctagga caatattgat atggagctta 120
atagccatag gagaatacaa gagagctgaa aaagaggcga ttataggact tggcattaaa 180
aaacatgaca taagaattat tcaagcacta ggagaagctt atttctttca aaaaaattat 240
gacaatgcat taaaatactt tcaagaatac attagccttg attctaaagg agcaagaata 300
ataaaaagttt ataattttaat tgcagattct ttttatgagc taaaaagata taatgaagcc 360
gattttgcat acgaacatgc attacgtttt tctcctaata accaaaatct attaataaaa 420
ttagcaagat caagaataaaa tgcaaaaaat aaaatattag cagaagaagc actaattaaa 480
attcttaciaa tctctcctaa taatctagag gcaaaaaatt tactagaaga attaaaaaaa 540
agcaacaaca aaccttga 558

<210> 413

<211> 1494

<212> PRT

<213> Homo sapiens

<400> 413

Met Lys Lys Ala Asn Phe Leu Ser Thr Asn Phe Leu Ile Leu Leu Leu
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Val Cys Phe Val Asn Val Asn Leu Phe Ser Lys Asp Ile Phe Lys Phe
20 25 30
Lys Leu Val Asp Gln Phe Phe Pro Phe Tyr Tyr Lys Asn Asn Lys Gly
35 40 45
Glu Tyr Glu Gly Leu Ile Phe Ser Ile Leu Asp Lys Trp Ala Lys Asp
50 55 60
Asn Asn Ala Asp Ile Met Val Glu His Ile Asp Asn Leu Asn Glu Ser
65 70 75 80
Glu Ile Glu Asp Glu Ala Ile Tyr Leu Gly Leu Thr Tyr Asn Val Lys
85 90 95
Leu Asn Asp Phe Phe Tyr Phe Lys Ser Glu Leu Ala Arg Ser Ile Ser
100 105 110
Ile Leu Phe Phe Lys Asn Ser Asn Lys Lys Tyr Lys Asn Thr His Ser
115 120 125
Thr Phe Leu Ser Asn Phe Asn Ile Gly Val Ile Lys Asn Thr Ile Tyr
130 135 140
Glu Asp Ile Leu Arg Leu Lys Asn Val Asn Thr Ile Phe Leu Ala Asp
145 150 155 160
Asn Ser Gln Glu Leu Val Leu Ala Leu Lys Asn Asp Lys Val Asp Tyr
165 170 175
Ile Tyr Gly Asp Cys Lys Thr Leu His Tyr Ile Ala Asn Asn Phe Leu
180 185 190

Ser Glu Asp Leu Val Ile Phe Thr Gly Asp Val Phe Tyr Ser Ile Lys
 195 200 205
 Asn Arg Val Ala Ile Ser Arg Asn Ala Pro Glu Ile Val Lys Asn Leu
 210 215 220
 Asn Leu Asp Leu Phe Ser Tyr Leu Met Lys Met Pro Glu Glu Leu Val
 225 230 235 240
 Phe Ser Phe Leu Asp Ser Asn Ala Lys Gly Ser Phe Val Asp Val Gly
 245 250 255
 Leu Tyr Asn Asp Tyr Pro Pro Leu Ser Phe Ile Asn Ser Gln Gly Lys
 260 265 270
 Leu Ser Gly Ile Leu Val Asp Leu Trp Asn Leu Leu Ser Arg Gln His
 275 280 285
 Ile Phe Lys Pro Ile Phe Lys Gly Phe Ser Lys Glu Asp Ile Lys Lys
 290 295 300
 Ser Leu Asp Gly Lys Ser Val Gly Ile Phe Gly Gly Ile Ile Ser Asn
 305 310 315 320
 Asp Ser Val Leu Glu Asn Val Asn Tyr Val Val Ser Lys Pro Ile Tyr
 325 330 335
 Pro Leu Asn Phe Lys Phe Tyr Ser Lys Asp Leu Ser Asn Asp Ala Gly
 340 345 350
 Pro Ile Asn Ser Gln Phe Ile Asp Phe Asn Phe Asn Asn Ile Gln Leu
 355 360 365
 Asn Lys Asn Lys Asp Ile Val Asn Asn Phe Ile Asp Ile Val Asn Asn
 370 375 380
 Ser Tyr Gly Phe Ile Glu Asn Ser Ile Thr Thr Lys Tyr Leu Leu Lys
 385 390 395 400
 Leu Asn Gly Tyr Asn Gly Arg Leu Lys Ser Tyr Asp Ser Ile Phe Asn
 405 410 415
 Lys Asn Arg Phe Leu Val Leu Ala Ile Asp Asn Arg Ile Tyr Lys Val
 420 425 430
 Ile Lys Tyr Ile Leu Asn Ser Ile Phe Asp Asp Ile Ser Phe Glu Ser
 435 440 445
 Leu Leu Gln Ile Asp Lys Asn Trp Leu Asp Lys Glu Glu Ile Asn Ser
 450 455 460
 Ser Arg Ile Asn Ser Tyr Lys Ile Met Asn Lys Val Lys Phe Asn Ile
 465 470 475 480
 Glu Glu Lys Ile Trp Leu Ser Lys Asn Asn Lys Leu Asn Leu Ala Val
 485 490 495
 Lys Asn Trp Tyr Pro Ile Asp Tyr Val Glu Ala Asn Asn Tyr Lys Gly
 500 505 510

Ile Asn Gln Phe Leu Leu Asp Lys Ile Arg Met Phe Ser Gly Leu Arg
 515 520 525
 Phe Asn Ile Ile Lys Val His Ser Ser Leu Asp Leu Lys Lys Leu Ile
 530 535 540
 Lys Ser Gly Lys Ile Asp Met Leu Asn Thr Asn Ala Thr Asp Ser Asn
 545 550 555 560
 Leu Asp Asn Val Phe Asn Ile Lys Leu Asn Ser Arg Ile Pro Leu Tyr
 565 570 575
 Ile Phe Ser Asn Lys Lys Arg Val Leu Pro Ser Arg Ser Leu Glu Lys
 580 585 590
 Phe Ala Ile Leu Asp Phe Leu Tyr Ser Lys Asn Leu Ala Ser Asn Ile
 595 600 605
 Lys Ser Lys Leu Ile Leu Val Ser Ser Phe Asn Glu Ala Leu Leu Leu
 610 615 620
 Leu Tyr Lys Gly Lys Val Asp Gly Ile Ile Ser Asp Glu Tyr Thr Ala
 625 630 635 640
 Ala Ala Val Phe Glu Glu Leu Asn Ile Asp Asp Val Glu Lys Ile Pro
 645 650 655
 Thr Phe Arg Asp Leu Ala Phe Asp Leu Ser Leu Ala Ile Tyr Asn Gln
 660 665 670
 Asp Tyr Ile Leu Lys Glu Ile Ile Gln Lys Val Val Met Arg Ser Asn
 675 680 685
 Val Asp Ser Gln Met Tyr Leu Asn Asp Trp Lys Phe Asp Ile Tyr Tyr
 690 695 700
 Lys Ser Arg Ser Ile Arg Phe Lys Asn Phe Lys Phe Leu Val Ile Thr
 705 710 715 720
 Phe Ile Ile Phe Tyr Phe Thr Phe Leu Gly Phe Val Ile Ile Phe Met
 725 730 735
 Phe Arg Leu Ser Phe Glu Gln Lys Arg Arg Tyr Ser Phe Val Met Asn
 740 745 750
 Glu Lys Lys Ile Ala Glu Ala Ala Asn Ala Ala Lys Thr Ile Phe Ile
 755 760 765
 Ala Asn Val Ser His Asp Ile Arg Thr Pro Ile Asn Gly Ile Met Ala
 770 775 780
 Ala Thr Glu Leu Leu Asp Thr Thr Ile Leu Thr Asp Val Gln Lys Asp
 785 790 795 800
 Tyr Val Arg Met Ile Asn Tyr Ser Ser Asp Ser Leu Leu Ser Leu Ile
 805 810 815
 Asp Asp Ile Leu Tyr Leu Ser Lys Ile Asp Val Asn Glu Leu Tyr Val
 820 825 830

Glu Ser Gln Glu Ile Asp Leu Glu Ser Glu Met Glu Met Val Leu Lys
 835 840 845
 Ala Phe Gln Ser Gln Cys Ala Lys Lys Asn Ile Asp Leu Phe Ser Tyr
 850 855 860
 Ser Lys Ser Ile Phe Asn Asn Tyr Ile Lys Gly Asp Ile Val Lys Ile
 865 870 875 880
 Lys Gln Val Leu Ile Asn Leu Ile Gly Asn Ala Phe Lys Phe Thr Asp
 885 890 895
 Asp Gly Val Ile Val Leu Asn Tyr Glu Glu Val Cys Arg Thr Arg Thr
 900 905 910
 Asp Gly Asn Arg Val Leu Val Thr Val Glu Phe Lys Val Ile Asp Thr
 915 920 925
 Gly Lys Gly Ile Glu Lys Glu Asn Phe Ser Lys Ile Phe Glu Ile Phe
 930 935 940
 Lys Gln Glu Asp Asp Ser Ser Ser Arg Val His Glu Gly Ala Gly Leu
 945 950 955 960
 Gly Leu Ser Ile Ser Arg Glu Leu Ile Arg Leu Met Gly Gly Leu Gly
 965 970 975
 Ile Ala Val Asp Ser Lys Val Gly Glu Gly Thr Thr Phe Ser Phe Met
 980 985 990
 Leu Pro Phe Leu Leu Gly Ser Glu Leu Lys Ser Lys Lys Leu Ser Ile
 995 1000 1005
 Asn Arg Phe Gln Ser Val Asn Gly Asp Asn Lys Val Leu Asn Val Leu
 1010 1015 1020
 Leu Ser Gln Lys Ser Ile Lys Ile Phe Glu His Cys Ser Ile Leu Leu
 1025 1030 1035 1040
 Gly Cys Ser Ser Asn Val Arg Tyr Val Ala Ser Phe Glu Asp Ala Tyr
 1045 1050 1055
 Lys Val Phe Lys Lys Tyr Pro Ser Tyr Asn Phe Val Tyr Ile Asn Val
 1060 1065 1070
 Asn Asn Asp Asn Ile Gln Glu Gly Ile Arg Leu Ala Asn Asn Ile Glu
 1075 1080 1085
 Arg Leu Asn Ser Asp Val Gln Ile Ile Phe Leu Phe Tyr Tyr Leu Asp
 1090 1095 1100
 Asn Lys Ala Leu Lys Asn Leu Lys Tyr Gly Tyr Val Lys Lys Pro Leu
 1105 1110 1115 1120
 Met Gly Leu Gly Ile Cys Ser Ile Leu Tyr Lys Lys Glu Phe Asn Pro
 1125 1130 1135
 Glu Met Asp Phe Glu Asp Leu Val Pro Ile Asp Ser Ala Leu Arg Ile
 1140 1145 1150

Lys Glu Pro Ile Asn Val Leu Ile Ala Glu Asp Asn Gln Val Asn Gln
 1155 1160 1165
 Lys Val Leu Lys Asp Ile Leu Val Val Ile Gly Ile Asn Glu Asn Phe
 1170 1175 1180
 Ile Asp Val Val Asp Asp Gly Val Lys Ala Leu Lys Ser Leu Lys Asp
 1185 1190 1195 1200
 Lys Lys Tyr Thr Ile Ser Phe Ile Asp Ile Arg Met Pro Arg Tyr Asp
 1205 1210 1215
 Gly Phe Ser Val Ala Lys Glu Ile Arg Lys Phe Glu Lys Ala Lys Asn
 1220 1225 1230
 Leu Lys Pro Cys Val Leu Val Ala Val Thr Ala His Ala Leu Gln Glu
 1235 1240 1245
 Tyr Lys Asp Lys Cys Leu Ala Ser Gly Met Asn Asp Tyr Ile Ser Lys
 1250 1255 1260
 Pro Ile His Ile Ser Ser Ile Lys Thr Ile Leu Lys Lys Tyr Leu Gln
 1265 1270 1275 1280
 Phe Glu Val Asp Asp Ile Gly Glu Asn Glu Asn Leu Asn Gln Leu Val
 1285 1290 1295
 Lys Phe Pro Asn Leu Asp Val Asn Arg Ala Leu Lys Glu Leu Asn Leu
 1300 1305 1310
 Ser Tyr Val Ser Tyr Ser Glu Leu Cys Arg Gly Leu Val Asp Phe Ile
 1315 1320 1325
 Ser Ile Asn Ile Ile Asp Leu Glu Lys Ala Phe Asp Glu Glu Asp Leu
 1330 1335 1340
 Ser Leu Ile Lys Asp Ile Ser His Ser Ile Ser Gly Ala Leu Ser Asn
 1345 1350 1355 1360
 Met Arg Ser Glu Leu Tyr Lys Asp Phe Gln Lys Ile Glu Thr Ser Lys
 1365 1370 1375
 Asp Ser Ile Ser Glu Leu Lys Lys Met Tyr Ser Phe Val Lys Asp Asp
 1380 1385 1390
 Leu Phe Gln Leu Ile Ser Asp Ile Lys Glu Asn Ile Leu Phe Glu Ser
 1395 1400 1405
 Glu Ile Val Ser Glu Asn Lys Leu Tyr Phe Lys Asn Asn Asp Gln Phe
 1410 1415 1420
 Leu Asn Leu Leu Asn Lys Leu Leu Ile Gly Ile Lys Thr Arg Lys Pro
 1425 1430 1435 1440
 Arg Glu Tyr Lys Glu Ile Leu Glu Ser Ile Asn Lys Tyr Val Leu Asp
 1445 1450 1455
 Asp Asn Ile Gln Val Leu Phe Ser Asp Leu Arg Arg Asn Leu Arg Leu
 1460 1465 1470

Tyr Arg Phe Ala Glu Ser Ser Lys Ile Leu Glu Glu Ile Ile Glu Met
 1475 1480 1485

Leu Asn Asn Lys Arg Tyr
 1490

<210> 414
 <211> 1477
 <212> PRT
 <213> Homo sapiens

<400> 414
 Cys Phe Val Asn Val Asn Leu Phe Ser Lys Asp Ile Phe Lys Phe Lys
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Leu Val Asp Gln Phe Phe Pro Phe Tyr Tyr Lys Asn Asn Lys Gly Glu
 20 25 30

Tyr Glu Gly Leu Ile Phe Ser Ile Leu Asp Lys Trp Ala Lys Asp Asn
 35 40 45

Asn Ala Asp Ile Met Val Glu His Ile Asp Asn Leu Asn Glu Ser Glu
 50 55 60

Ile Glu Asp Glu Ala Ile Tyr Leu Gly Leu Thr Tyr Asn Val Lys Leu
 65 70 75 80

Asn Asp Phe Phe Tyr Phe Lys Ser Glu Leu Ala Arg Ser Ile Ser Ile
 85 90 95

Leu Phe Phe Lys Asn Ser Asn Lys Lys Tyr Lys Asn Thr His Ser Thr
 100 105 110

Phe Leu Ser Asn Phe Asn Ile Gly Val Ile Lys Asn Thr Ile Tyr Glu
 115 120 125

Asp Ile Leu Arg Leu Lys Asn Val Asn Thr Ile Phe Leu Ala Asp Asn
 130 135 140

Ser Gln Glu Leu Val Leu Ala Leu Lys Asn Asp Lys Val Asp Tyr Ile
 145 150 155 160

Tyr Gly Asp Cys Lys Thr Leu His Tyr Ile Ala Asn Asn Phe Leu Ser
 165 170 175

Glu Asp Leu Val Ile Phe Thr Gly Asp Val Phe Tyr Ser Ile Lys Asn
 180 185 190

Arg Val Ala Ile Ser Arg Asn Ala Pro Glu Ile Val Lys Asn Leu Asn
 195 200 205

Leu Asp Leu Phe Ser Tyr Leu Met Lys Met Pro Glu Glu Leu Val Phe
 210 215 220

Ser Phe Leu Asp Ser Asn Ala Lys Gly Ser Phe Val Asp Val Gly Leu
 225 230 235 240

Tyr Asn Asp Tyr Pro Pro Leu Ser Phe Ile Asn Ser Gln Gly Lys Leu
 245 250 255

Ser Gly Ile Leu Val Asp Leu Trp Asn Leu Leu Ser Arg Gln His Ile
 260 265 270
 Phe Lys Pro Ile Phe Lys Gly Phe Ser Lys Glu Asp Ile Lys Lys Ser
 275 280 285
 Leu Asp Gly Lys Ser Val Gly Ile Phe Gly Gly Ile Ile Ser Asn Asp
 290 295 300
 Ser Val Leu Glu Asn Val Asn Tyr Val Val Ser Lys Pro Ile Tyr Pro
 305 310 315 320
 Leu Asn Phe Lys Phe Tyr Ser Lys Asp Leu Ser Asn Asp Ala Gly Pro
 325 330 335
 Ile Asn Ser Gln Phe Ile Asp Phe Asn Phe Asn Asn Ile Gln Leu Asn
 340 345 350
 Lys Asn Lys Asp Ile Val Asn Asn Phe Ile Asp Ile Val Asn Asn Ser
 355 360 365
 Tyr Gly Phe Ile Glu Asn Ser Ile Thr Thr Lys Tyr Leu Leu Lys Leu
 370 375 380
 Asn Gly Tyr Asn Gly Arg Leu Lys Ser Tyr Asp Ser Ile Phe Asn Lys
 385 390 395 400
 Asn Arg Phe Leu Val Leu Ala Ile Asp Asn Arg Ile Tyr Lys Val Ile
 405 410 415
 Lys Tyr Ile Leu Asn Ser Ile Phe Asp Asp Ile Ser Phe Glu Ser Leu
 420 425 430
 Leu Gln Ile Asp Lys Asn Trp Leu Asp Lys Glu Glu Ile Asn Ser Ser
 435 440 445
 Arg Ile Asn Ser Tyr Lys Ile Met Asn Lys Val Lys Phe Asn Ile Glu
 450 455 460
 Glu Lys Ile Trp Leu Ser Lys Asn Asn Lys Leu Asn Leu Ala Val Lys
 465 470 475 480
 Asn Trp Tyr Pro Ile Asp Tyr Val Glu Ala Asn Asn Tyr Lys Gly Ile
 485 490 495
 Asn Gln Phe Leu Leu Asp Lys Ile Arg Met Phe Ser Gly Leu Arg Phe
 500 505 510
 Asn Ile Ile Lys Val His Ser Ser Leu Asp Leu Lys Lys Leu Ile Lys
 515 520 525
 Ser Gly Lys Ile Asp Met Leu Asn Thr Asn Ala Thr Asp Ser Asn Leu
 530 535 540
 Asp Asn Val Phe Asn Ile Lys Leu Asn Ser Arg Ile Pro Leu Tyr Ile
 545 550 555 560
 Phe Ser Asn Lys Lys Arg Val Leu Pro Ser Arg Ser Leu Glu Lys Phe
 565 570 575

Ala Ile Leu Asp Phe Leu Tyr Ser Lys Asn Leu Ala Ser Asn Ile Lys
 580 585 590
 Ser Lys Leu Ile Leu Val Ser Ser Phe Asn Glu Ala Leu Leu Leu Leu
 595 600 605
 Tyr Lys Gly Lys Val Asp Gly Ile Ile Ser Asp Glu Tyr Thr Ala Ala
 610 615 620
 Ala Val Phe Glu Glu Leu Asn Ile Asp Asp Val Glu Lys Ile Pro Thr
 625 630 635 640
 Phe Arg Asp Leu Ala Phe Asp Leu Ser Leu Ala Ile Tyr Asn Gln Asp
 645 650 655
 Tyr Ile Leu Lys Glu Ile Ile Gln Lys Val Val Met Arg Ser Asn Val
 660 665 670
 Asp Ser Gln Met Tyr Leu Asn Asp Trp Lys Phe Asp Ile Tyr Tyr Lys
 675 680 685
 Ser Arg Ser Ile Arg Phe Lys Asn Phe Lys Phe Leu Val Ile Thr Phe
 690 695 700
 Ile Ile Phe Tyr Phe Thr Phe Leu Gly Phe Val Ile Ile Phe Met Phe
 705 710 715 720
 Arg Leu Ser Phe Glu Gln Lys Arg Arg Tyr Ser Phe Val Met Asn Glu
 725 730 735
 Lys Lys Ile Ala Glu Ala Ala Asn Ala Ala Lys Thr Ile Phe Ile Ala
 740 745 750
 Asn Val Ser His Asp Ile Arg Thr Pro Ile Asn Gly Ile Met Ala Ala
 755 760 765
 Thr Glu Leu Leu Asp Thr Thr Ile Leu Thr Asp Val Gln Lys Asp Tyr
 770 775 780
 Val Arg Met Ile Asn Tyr Ser Ser Asp Ser Leu Leu Ser Leu Ile Asp
 785 790 795 800
 Asp Ile Leu Tyr Leu Ser Lys Ile Asp Val Asn Glu Leu Tyr Val Glu
 805 810 815
 Ser Gln Glu Ile Asp Leu Glu Ser Glu Met Glu Met Val Leu Lys Ala
 820 825 830
 Phe Gln Ser Gln Cys Ala Lys Lys Asn Ile Asp Leu Phe Ser Tyr Ser
 835 840 845
 Lys Ser Ile Phe Asn Asn Tyr Ile Lys Gly Asp Ile Val Lys Ile Lys
 850 855 860
 Gln Val Leu Ile Asn Leu Ile Gly Asn Ala Phe Lys Phe Thr Asp Asp
 865 870 875 880
 Gly Val Ile Val Leu Asn Tyr Glu Glu Val Cys Arg Thr Arg Thr Asp
 885 890 895

Gly Asn Arg Val Leu Val Thr Val Glu Phe Lys Val Ile Asp Thr Gly
 900 905 910
 Lys Gly Ile Glu Lys Glu Asn Phe Ser Lys Ile Phe Glu Ile Phe Lys
 915 920 925
 Gln Glu Asp Asp Ser Ser Ser Arg Val His Glu Gly Ala Gly Leu Gly
 930 935 940
 Leu Ser Ile Ser Arg Glu Leu Ile Arg Leu Met Gly Gly Leu Gly Ile
 945 950 955 960
 Ala Val Asp Ser Lys Val Gly Glu Gly Thr Thr Phe Ser Phe Met Leu
 965 970 975
 Pro Phe Leu Leu Gly Ser Glu Leu Lys Ser Lys Lys Leu Ser Ile Asn
 980 985 990
 Arg Phe Gln Ser Val Asn Gly Asp Asn Lys Val Leu Asn Val Leu Leu
 995 1000 1005
 Ser Gln Lys Ser Ile Lys Ile Phe Glu His Cys Ser Ile Leu Leu Gly
 1010 1015 1020
 Cys Ser Ser Asn Val Arg Tyr Val Ala Ser Phe Glu Asp Ala Tyr Lys
 1025 1030 1035 1040
 Val Phe Lys Lys Tyr Pro Ser Tyr Asn Phe Val Tyr Ile Asn Val Asn
 1045 1050 1055
 Asn Asp Asn Ile Gln Glu Gly Ile Arg Leu Ala Asn Asn Ile Glu Arg
 1060 1065 1070
 Leu Asn Ser Asp Val Gln Ile Ile Phe Leu Phe Tyr Tyr Leu Asp Asn
 1075 1080 1085
 Lys Ala Leu Lys Asn Leu Lys Tyr Gly Tyr Val Lys Lys Pro Leu Met
 1090 1095 1100
 Gly Leu Gly Ile Cys Ser Ile Leu Tyr Lys Lys Glu Phe Asn Pro Glu
 1105 1110 1115 1120
 Met Asp Phe Glu Asp Leu Val Pro Ile Asp Ser Ala Leu Arg Ile Lys
 1125 1130 1135
 Glu Pro Ile Asn Val Leu Ile Ala Glu Asp Asn Gln Val Asn Gln Lys
 1140 1145 1150
 Val Leu Lys Asp Ile Leu Val Val Ile Gly Ile Asn Glu Asn Phe Ile
 1155 1160 1165
 Asp Val Val Asp Asp Gly Val Lys Ala Leu Lys Ser Leu Lys Asp Lys
 1170 1175 1180
 Lys Tyr Thr Ile Ser Phe Ile Asp Ile Arg Met Pro Arg Tyr Asp Gly
 1185 1190 1195 1200
 Phe Ser Val Ala Lys Glu Ile Arg Lys Phe Glu Lys Ala Lys Asn Leu
 1205 1210 1215

Lys Pro Cys Val Leu Val Ala Val Thr Ala His Ala Leu Gln Glu Tyr
1220 1225 1230

Lys Asp Lys Cys Leu Ala Ser Gly Met Asn Asp Tyr Ile Ser Lys Pro
1235 1240 1245

Ile His Ile Ser Ser Ile Lys Thr Ile Leu Lys Lys Tyr Leu Gln Phe
1250 1255 1260

Glu Val Asp Asp Ile Gly Glu Asn Glu Asn Leu Asn Gln Leu Val Lys
1265 1270 1275 1280

Phe Pro Asn Leu Asp Val Asn Arg Ala Leu Lys Glu Leu Asn Leu Ser
1285 1290 1295

Tyr Val Ser Tyr Ser Glu Leu Cys Arg Gly Leu Val Asp Phe Ile Ser
1300 1305 1310

Ile Asn Ile Ile Asp Leu Glu Lys Ala Phe Asp Glu Glu Asp Leu Ser
1315 1320 1325

Leu Ile Lys Asp Ile Ser His Ser Ile Ser Gly Ala Leu Ser Asn Met
1330 1335 1340

Arg Ser Glu Leu Tyr Lys Asp Phe Gln Lys Ile Glu Thr Ser Lys Asp
1345 1350 1355 1360

Ser Ile Ser Glu Leu Lys Lys Met Tyr Ser Phe Val Lys Asp Asp Leu
1365 1370 1375

Phe Gln Leu Ile Ser Asp Ile Lys Glu Asn Ile Leu Phe Glu Ser Glu
1380 1385 1390

Ile Val Ser Glu Asn Lys Leu Tyr Phe Lys Asn Asn Asp Gln Phe Leu
1395 1400 1405

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 <212> DNA
 <213> Homo sapiens

<400> 419

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aaccaaaagc aaagcgagat tcaaaatctt acacatcttt taaaatcttc taataaaaaat 120
agattagata aatttcttat tattgataga gttgttaaca tatatattgc aaataaaaaat 180
tatgaagatg ctttagaaat tgtaaataat ggaattattg atgatgaatc tagagaatat 240
tatcctttgt atctttatatt aatgggcaat atttatgatt ccatgggaga agatttttga 300
gcttttaata ttacaagcg tgttggtgat aattttgatg attatgttta tgaaaacccat 360
tcaatgaaaa caagggttgc taaaaagatt gtcaatttaa atattgattc aatcgataaa 420
atcaattatt acaaatttat attaaatatg gggattgata atttaaataa tgaggaaaaag 480
ggtaattatt ttataatct tgcgctaagt ttggaagatg ttcaagatta cgatgaatct 540
tattttttatt ataaaaaatt tctttcaatt ccaagggcac atttaaaaaat agattctaga 600
gactatttta atgttggttac aaaaattaat tactttaata atccagagtt tgttgtttat 660
agaaatttag gagatttaat ccaggatggt aaaaattttg ttctttctgg taatacttct 720
aaattgctta atataagaga taagaataat ttttttattc aaagctggga tcaaaaaggg 780
ggaaagagta attccattaa tactaatagc tttttaacca ctatgattag gcttgggggg 840
agaagaaaaa acggaatata atttgcaaag catcttgagg cagattctag tgacgatata 900
tcttatcttg agtcaagggg ctgggacccat attcatgaat ggtattttgt ttttaaaaga 960
attgtttatc ctaaagatcc agaaattaat aatggctgga cttggatagg cgtgtattta 1020
ggtaaaaaat aa 1032
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<210> 420

<211> 975

<212> DNA

<213> Homo sapiens

<400> 420

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tgcaacaaaa agcaaagcga gattcaaaat cttacacatc ttttaaaatc ttctaataaaa 60
aatagattag ataaatttct tattattgat agagttgtta acatatatat tgcaaataaaa 120
aattatgaag atgcttttaga aattgtaaat aatggaatta ttgatgatga atctagagaa 180
tattatcctt tgtatcttta tttaatgggc aatattttatg attccatggg agaagatttt 240
gtagctttta atattttacaa gcgtgttggt gataattttg atgattatgt ttatgaaaaa 300
cattcaatga aaacaagggg tgctaaaaag attgtcaatt taaatattga ttcaatcgat 360
aaaatcaatt attacaaatt tatattaaat atggggattg ataattttaa taatgaggaa 420
aagggttaatt atttttataa tcttgcgcta agtttgaag atgttcaaga ttacgatgaa 480
tcttattttt attataaaaa atttctttca attccaaggg cacattttaa aatagattct 540
agagactatt ttaatgttgt tacaaaaaatt aattacttta ataatccaga gtttggtgtt 600
tatagaaatt taggagattt aatccaggat gttaaaaaatt ttgttctttc tggtaatact 660
tctaaattgc ttaataataag agataagaat aattttttta ttcaaagctg ggatcaaaaag 720
ggtggaagaa gtaattccat taatactaata agctttttta ccactatgat taggcttggg 780
gggagaagaa aaaacggaat acaatttgca aagcatcttg aggcagattc tagtgacgat 840
atatcttatt ttgagtcgaag gggctgggac catattcatg aatgggtatt tgttttttaa 900
agaattgttt atcctaaaga tccagaaatt aataatggct ggacttggat aggcgtgtat 960
ttaggtaaaa aataa 975
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<210> 421

<211> 339

<212> PRT

<213> Homo sapiens

<400> 421

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Met Asn Lys Ile Leu Leu Leu Ile Leu Leu Glu Ser Ile Val Phe Leu
  1             5             10            15

Ser Cys Ser Gly Lys Gly Ser Leu Gly Ser Glu Ile Pro Lys Val Ser
          20          25          30

Leu Ile Ile Asp Gly Thr Phe Asp Asp Lys Ser Phe Asn Glu Ser Ala
          35          40          45
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Leu Asn Gly Val Lys Lys Val Lys Glu Glu Phe Lys Ile Glu Leu Val
 50 55 60
 Leu Lys Glu Ser Ser Ser Asn Ser Tyr Leu Ser Asp Leu Glu Gly Leu
 65 70 75 80
 Lys Asp Ala Gly Ser Asp Leu Ile Trp Leu Ile Gly Tyr Arg Phe Ser
 85 90 95
 Asp Val Ala Lys Val Ala Ala Leu Gln Asn Pro Asp Met Lys Tyr Ala
 100 105 110
 Ile Ile Asp Pro Ile Tyr Ser Asn Asp Pro Ile Pro Ala Asn Leu Val
 115 120 125
 Gly Met Thr Phe Arg Ala Gln Glu Gly Ala Phe Leu Thr Gly Tyr Ile
 130 135 140
 Ala Ala Lys Leu Ser Lys Thr Gly Lys Ile Gly Phe Leu Gly Gly Ile
 145 150 155 160
 Glu Gly Glu Ile Val Asp Ala Phe Arg Tyr Gly Tyr Glu Ala Gly Ala
 165 170 175
 Lys Tyr Ala Asn Lys Asp Ile Lys Ile Ser Thr Gln Tyr Ile Gly Ser
 180 185 190
 Phe Ala Asp Leu Glu Ala Gly Arg Ser Val Ala Thr Arg Met Tyr Ser
 195 200 205
 Asp Glu Ile Asp Ile Ile His His Ala Ala Gly Leu Gly Gly Ile Gly
 210 215 220
 Ala Ile Glu Val Ala Lys Glu Leu Gly Ser Gly His Tyr Ile Ile Gly
 225 230 235 240
 Val Asp Glu Asp Gln Ala Tyr Leu Ala Pro Asp Asn Val Ile Thr Ser
 245 250 255
 Thr Thr Lys Asp Val Gly Arg Ala Leu Asn Ile Phe Thr Ser Asn His
 260 265 270
 Leu Lys Thr Asn Thr Phe Glu Gly Gly Lys Leu Ile Asn Tyr Gly Leu
 275 280 285
 Lys Glu Gly Val Val Gly Phe Val Arg Asn Pro Lys Met Ile Ser Phe
 290 295 300
 Glu Leu Glu Lys Glu Ile Asp Asn Leu Ser Ser Lys Ile Ile Asn Lys
 305 310 315 320
 Glu Ile Ile Val Pro Ser Asn Lys Glu Ser Tyr Glu Lys Phe Leu Lys
 325 330 335
 Glu Phe Ile

<210> 422
 <211> 322
 <212> PRT

<213> Homo sapiens

<400> 422

Cys Ser Gly Lys Gly Ser Leu Gly Ser Glu Ile Pro Lys Val Ser Leu
1 5 10 15
Ile Ile Asp Gly Thr Phe Asp Asp Lys Ser Phe Asn Glu Ser Ala Leu
20 25 30
Asn Gly Val Lys Lys Val Lys Glu Glu Phe Lys Ile Glu Leu Val Leu
35 40 45
Lys Glu Ser Ser Ser Asn Ser Tyr Leu Ser Asp Leu Glu Gly Leu Lys
50 55 60
Asp Ala Gly Ser Asp Leu Ile Trp Leu Ile Gly Tyr Arg Phe Ser Asp
65 70 75 80
Val Ala Lys Val Ala Ala Leu Gln Asn Pro Asp Met Lys Tyr Ala Ile
85 90 95
Ile Asp Pro Ile Tyr Ser Asn Asp Pro Ile Pro Ala Asn Leu Val Gly
100 105 110
Met Thr Phe Arg Ala Gln Glu Gly Ala Phe Leu Thr Gly Tyr Ile Ala
115 120 125
Ala Lys Leu Ser Lys Thr Gly Lys Ile Gly Phe Leu Gly Gly Ile Glu
130 135 140
Gly Glu Ile Val Asp Ala Phe Arg Tyr Gly Tyr Glu Ala Gly Ala Lys
145 150 155 160
Tyr Ala Asn Lys Asp Ile Lys Ile Ser Thr Gln Tyr Ile Gly Ser Phe
165 170 175
Ala Asp Leu Glu Ala Gly Arg Ser Val Ala Thr Arg Met Tyr Ser Asp
180 185 190
Glu Ile Asp Ile Ile His His Ala Ala Gly Leu Gly Gly Ile Gly Ala
195 200 205
Ile Glu Val Ala Lys Glu Leu Gly Ser Gly His Tyr Ile Ile Gly Val
210 215 220
Asp Glu Asp Gln Ala Tyr Leu Ala Pro Asp Asn Val Ile Thr Ser Thr
225 230 235 240
Thr Lys Asp Val Gly Arg Ala Leu Asn Ile Phe Thr Ser Asn His Leu
245 250 255
Lys Thr Asn Thr Phe Glu Gly Gly Lys Leu Ile Asn Tyr Gly Leu Lys
260 265 270
Glu Gly Val Val Gly Phe Val Arg Asn Pro Lys Met Ile Ser Phe Glu
275 280 285
Leu Glu Lys Glu Ile Asp Asn Leu Ser Ser Lys Ile Ile Asn Lys Glu
290 295 300

Ile Ile Val Pro Ser Asn Lys Glu Ser Tyr Glu Lys Phe Leu Lys Glu
 305 310 315 320

Phe Ile

<210> 423

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 423

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atgaataaaa tattgttggt gattttgctt gagagtattg tttttttatc ttgtagtggt 60
aaaggtagtc ttgggagcga aattcctaag gtatctttaa taattgatgg aacttttgat 120
gataaatctt ttaatgagag tgctttaaat ggcgtaaaaa aagttaaaga agaatttaaa 180
attgagcttg ttttaaaaga atcctcatca aattcttatt tatctgatct tgaagggctt 240
aaggatgcgg gctcagattt aatttggtt attgggtata gatttagcga tgtggccaag 300
gttgcggctc ttcaaaatcc cgatatgaaa tatgcaatta ttgatcctat ttattctaac 360
gatcctattc ctgcaaattt ggtgggcatg accttagag ctcaagaggg tgcattttta 420
acgggttata ttgctgcaaa actttctaaa acaggtaaaa ttggattttt agggggaata 480
gaaggcgaga tagtagatgc ttttaggtat gggatgaag ctgggtgctaa gtatgctaata 540
aaagatataa agatatctac tcagtatatt ggtagttttg ctgaccttga agctggtaga 600
agcgttgcaa ctaggatgta ttctgatgag atagacatta ttcacatgct tgcaggcctt 660
ggaggaattg gggctattga ggttgcaaaa gaacttggtt ctgggcatta cattattgga 720
gttgatgaag atcaagcata tcttgctcct gacaatgtaa taacatctac aactaaagat 780
gttggtagag ctttaaatat tttacatct aaccatttaa aaactaatac tttcgaagg 840
ggcaaattaa taaattatgg ccttaaagaa ggagtgtggt ggtttgtaag aaatcctaaa 900
atgatttcct ttgaacttga aaaagaaatt gacaatcttt ctagcaaaat aatcaacaaa 960
gaaattattg ttccatctaa taaagaaagt tatgagaagt ttcttaaaga atttatttaa 1020

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<210> 424

<211> 969

<212> DNA

<213> Homo sapiens

<400> 424

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acttttgatg ataaatcttt taatgagagt gctttaaatg gcgtaaaaaa agttaagaa 120
gaatttaaaa ttgagcttgt tttaaaagaa tcctcatcaa attcttattt atctgatctt 180
gaagggtcta aggatgcggg ctcagattta atttggtcta ttgggtatag atttagcgat 240
gtggccaagg ttgcggctct tcaaaatccc gatatgaaat atgcaattat tgatcctatt 300
tattctaacg atcctattcc tgcaaatttg gtgggcatga cctttagagc tcaagagggt 360
gcatttttaa cgggttatat tgctgcaaaa ctttctaaaa caggtaaaat tggattttta 420
gggggaatag aaggcgagat agtagatgct tttaggtagt ggtatgaagc tgggtgctaag 480
tatgctaata aagatataaa gatattctact cagtattatt gtagttttgc tgaccttgaa 540
gctggtagaa gcgttgcaac taggatgtat tctgatgaga tagacattat tcatcatgct 600
gcaggccttg gaggaattgg ggctattgag gttgcaaaag aacttggttc tgggcattac 660
attattggag ttgatgaaga tcaagcatat cttgctcctg acaatgtaat aacatctaca 720
actaaagatg ttggtagagc tttaaatatt tttacatcta accattttaa aactaatact 780
ttcgaagggt gcaaattaat aaattatggc cttaaagaag gagttgtggg gtttgtaaga 840
aatcctaaaa tgatttcctt tgaacttgaa aaagaaattg acaatctttc tagcaaaata 900
atcaacaaag aaattattgt tccatctaata aaagaaagtt atgagaagtt tcttaaagaa 960
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<210> 425

<211> 194

<212> PRT

<213> Homo sapiens

<400> 425

Met Tyr Lys Asn Gly Phe Phe Lys Asn Tyr Leu Ser Leu Phe Leu Ile
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 Phe Leu Val Ile Ala Cys Thr Ser Lys Asp Ser Ser Asn Glu Tyr Val
 20 25 30
 Glu Glu Gln Glu Ala Glu Asn Ser Ser Lys Pro Asp Asp Ser Lys Ile
 35 40 45
 Asp Glu His Thr Ile Gly His Val Phe His Ala Met Gly Val Val His
 50 55 60
 Ser Lys Lys Asp Arg Lys Ser Leu Gly Lys Asn Ile Lys Val Phe Tyr
 65 70 75 80
 Phe Ser Glu Glu Asp Gly His Phe Gln Thr Ile Pro Ser Lys Glu Asn
 85 90 95
 Ala Lys Leu Ile Val Tyr Phe Tyr Asp Asn Val Tyr Ala Gly Glu Ala
 100 105 110
 Pro Ile Ser Ile Ser Gly Lys Glu Ala Phe Ile Phe Val Gly Ile Thr
 115 120 125
 Pro Asp Phe Lys Lys Ile Ile Asn Ser Asn Leu His Gly Ala Lys Ser
 130 135 140
 Asp Leu Ile Gly Thr Phe Lys Asp Leu Asn Ile Lys Asn Ser Lys Leu
 145 150 155 160
 Glu Ile Thr Val Asp Glu Asn Asn Ser Asp Ala Lys Thr Phe Leu Glu
 165 170 175
 Ser Val Asn Tyr Ile Ile Asp Gly Val Glu Lys Ile Ser Pro Met Leu
 180 185 190

Thr Asn

<210> 426
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 426
 Cys Thr Ser Lys Asp Ser Ser Asn Glu Tyr Val Glu Glu Gln Glu Ala
 1 5 10 15
 Glu Asn Ser Ser Lys Pro Asp Asp Ser Lys Ile Asp Glu His Thr Ile
 20 25 30
 Gly His Val Phe His Ala Met Gly Val Val His Ser Lys Lys Asp Arg
 35 40 45
 Lys Ser Leu Gly Lys Asn Ile Lys Val Phe Tyr Phe Ser Glu Glu Asp
 50 55 60
 Gly His Phe Gln Thr Ile Pro Ser Lys Glu Asn Ala Lys Leu Ile Val
 65 70 75 80

Tyr Phe Tyr Asp Asn Val Tyr Ala Gly Glu Ala Pro Ile Ser Ile Ser
 85 90 95
 Gly Lys Glu Ala Phe Ile Phe Val Gly Ile Thr Pro Asp Phe Lys Lys
 100 105 110
 Ile Ile Asn Ser Asn Leu His Gly Ala Lys Ser Asp Leu Ile Gly Thr
 115 120 125
 Phe Lys Asp Leu Asn Ile Lys Asn Ser Lys Leu Glu Ile Thr Val Asp
 130 135 140
 Glu Asn Asn Ser Asp Ala Lys Thr Phe Leu Glu Ser Val Asn Tyr Ile
 145 150 155 160
 Ile Asp Gly Val Glu Lys Ile Ser Pro Met Leu Thr Asn
 165 170

<210> 427
 <211> 585
 <212> DNA
 <213> Homo sapiens

<400> 427
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 gcttgacttt caaaagatag ctcaaatgaa tatgttgagg agcaagaagc ggagaactct 120
 tctaagcctg atgattctaa aatagatgaa catactattg ggcacgtttt tcacgctatg 180
 ggagtagttc attcaaaaaa ggatcgaaaa agtttgggga aaaatataaa ggttttttat 240
 ttttctgaag aagatggaca ttttcaaaca ataccctcaa aagagaatgc aaagttaata 300
 gtttattttt atgacaatgt ttatgcagga gaggtcctaa ttagtatctc tggaaaagaa 360
 gcctttattt ttgttgggat taccctgac tttaaaaaga ttataaatag caatttacat 420
 ggcgctaaaa gtgatcttat tgggtacttt aaagatctta atattaaaaa ttcaaaattg 480
 gaaattacag ttgatgagaa taattcagat gccaaagacct tccttgaatc tgtaattac 540
 attatcgacg gcgttgaaaa aatttcacct atgttaacga attaa 585

<210> 428
 <211> 522
 <212> DNA
 <213> Homo sapiens

<400> 428
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 aagcctgatg attctaaaat agatgaacat actattgggc acgtttttca cgctatggga 120
 gtagttcatt caaaaaagga tcgaaaaagt ttggggaaaa atataaagggt tttttatttt 180
 tctgaagaag atggacattt tcaaacaata ccctcaaaag agaatgcaa gttaatagtt 240
 tattttttatg acaatgttta tgcaggagag gctccaatta gtatctctgg aaaagaagcc 300
 tttatttttg ttgggattac ccctgacttt aaaaagatta taaatagcaa ttacatggc 360
 gctaaaagtg atcttattgg tactttttaa gatcttaata ttaaaaattc aaaattggaa 420
 attacagttg atgagaataa ttcagatgcc aagaccttcc ttgaatctgt taattacatt 480
 atcgacggcg ttgaaaaaat ttcacctatg ttaacgaatt aa 522

<210> 429
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 429
 Met Ser Phe Asn Lys Thr Lys Lys Ile Gly Lys Lys Ile Lys Ile Val
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Thr Leu Leu Met Leu Ala Val Ser Leu Ile Ala Cys Asn Asn Asn Ser
 20 25 30
 Glu Lys Glu Lys Leu Ala Phe Lys Val Tyr Ile Gly Gly Ala Pro Ser
 35 40 45
 Ser Leu Asp Pro His Leu Val Asp Glu Thr Ile Gly Ala Arg Ile Leu
 50 55 60
 Glu Gln Ile Phe Ser Gly Leu Leu Thr Leu Asn Thr Lys Thr Gly Lys
 65 70 75 80
 Leu Lys Pro Gly Leu Ala Lys Asn Trp Glu Ala Ser Lys Asp Lys Lys
 85 90 95
 Thr Tyr Gln Phe Tyr Leu Arg Asp Asn Leu Phe Trp Ser Asp Gly Val
 100 105 110
 Glu Ile Thr Ala Glu Gly Ile Arg Lys Ser Phe Leu Arg Ile Leu Asn
 115 120 125
 Lys Glu Thr Gly Ser Thr Asn Val Asp Met Leu Lys Ser Ile Ile Lys
 130 135 140
 Asn Gly Gln Glu Tyr Phe Asp Gly Lys Val Ser Asp Ser Glu Leu Gly
 145 150 155 160
 Ile Lys Ala Ile Asp Ser Lys Thr Leu Glu Ile Thr Leu Thr Ala Pro
 165 170 175
 Lys Pro Tyr Phe Leu Glu Leu Leu Leu His Tyr Ala Phe Met Pro Val
 180 185 190
 Pro Ile His Val Ile Glu Lys Tyr Lys Gly Asn Trp Thr Ser Pro Glu
 195 200 205
 Asn Met Val Thr Ser Gly Pro Phe Lys Leu Lys Lys Arg Leu Pro Asn
 210 215 220
 Glu Lys Ile Ile Phe Glu Lys Asn Glu Arg Tyr Tyr Asn Ala Lys Glu
 225 230 235 240
 Val Glu Leu Asp Glu Leu Val Tyr Ile Thr Ser Asp Asn Asp Leu Thr
 245 250 255
 Val Tyr Asn Met Tyr Lys Asn Asn Glu Ile Asp Ala Ile Phe Asn Ser
 260 265 270
 Ile Pro Pro Asp Ile Val Asn Glu Ile Lys Leu Gln Lys Asp Tyr Tyr
 275 280 285
 Gln His Lys Ser Asn Ala Ile Tyr Leu Tyr Ser Phe Asn Thr Lys Ile
 290 295 300
 Lys Pro Leu Asp Asp Ala Arg Val Arg Glu Ala Leu Thr Leu Ala Ile
 305 310 315 320
 Asp Arg Glu Thr Leu Thr Tyr Lys Val Leu Asn Asp Gly Thr Val Pro
 325 330 335

Thr Arg Glu Ile Thr Pro Asp Leu Lys Asn Tyr Asn Tyr Gly Lys Lys
 340 345 350
 Leu Ala Leu Phe Asp Pro Glu Lys Ser Lys Lys Leu Leu Ala Asp Ala
 355 360 365
 Gly Tyr Pro Asn Gly Lys Gly Phe Pro Met Leu Thr Leu Lys Tyr Asn
 370 375 380
 Thr Asn Glu Thr His Lys Lys Ile Ala Ala Phe Ile Gln Asn Gln Trp
 385 390 395 400
 Lys Lys Ile Leu Asn Ile Asn Leu Met Leu Thr Asn Glu Asn Trp Pro
 405 410 415
 Val Leu Thr Asn Ser Arg Asn Thr Gly Asn Phe Glu Ile Ile Arg Val
 420 425 430
 Gly Arg Ile Gly Glu Tyr Leu Asp Pro His Thr Tyr Phe Thr Ile Phe
 435 440 445
 Thr Arg Glu Asn Ser Gln Leu Ala Ser Tyr Gly Tyr Ser Asn Leu Glu
 450 455 460
 Phe Asp Lys Leu Ile Arg Glu Ser Asp Leu Glu Lys Asp Pro Ile Lys
 465 470 475 480
 Arg Lys Gln Leu Leu Arg Lys Ala Glu Ser Ile Ile Ile Glu Lys Asp
 485 490 495
 Phe Pro Ala Ala Pro Ile Tyr Ile Tyr Ser Gly His Tyr Leu Phe Arg
 500 505 510
 Asn Asp Lys Trp Thr Gly Trp Asn Pro Asn Val Ser Glu Val Tyr Tyr
 515 520 525
 Leu Ser Glu Leu Lys Pro Ile Lys Asn Ala Lys His Asn
 530 535 540
 <210> 430
 <211> 514
 <212> PRT
 <213> Homo sapiens
 <400> 430
 Cys Asn Asn Asn Ser Glu Lys Glu Lys Leu Ala Phe Lys Val Tyr Ile
 1 5 10 15
 Gly Gly Ala Pro Ser Ser Leu Asp Pro His Leu Val Asp Glu Thr Ile
 20 25 30
 Gly Ala Arg Ile Leu Glu Gln Ile Phe Ser Gly Leu Leu Thr Leu Asn
 35 40 45
 Thr Lys Thr Gly Lys Leu Lys Pro Gly Leu Ala Lys Asn Trp Glu Ala
 50 55 60
 Ser Lys Asp Lys Lys Thr Tyr Gln Phe Tyr Leu Arg Asp Asn Leu Phe
 65 70 75 80

Trp Ser Asp Gly Val Glu Ile Thr Ala Glu Gly Ile Arg Lys Ser Phe
 85 90 95
 Leu Arg Ile Leu Asn Lys Glu Thr Gly Ser Thr Asn Val Asp Met Leu
 100 105 110
 Lys Ser Ile Ile Lys Asn Gly Gln Glu Tyr Phe Asp Gly Lys Val Ser
 115 120 125
 Asp Ser Glu Leu Gly Ile Lys Ala Ile Asp Ser Lys Thr Leu Glu Ile
 130 135 140
 Thr Leu Thr Ala Pro Lys Pro Tyr Phe Leu Glu Leu Leu Leu His Tyr
 145 150 155 160
 Ala Phe Met Pro Val Pro Ile His Val Ile Glu Lys Tyr Lys Gly Asn
 165 170 175
 Trp Thr Ser Pro Glu Asn Met Val Thr Ser Gly Pro Phe Lys Leu Lys
 180 185 190
 Lys Arg Leu Pro Asn Glu Lys Ile Ile Phe Glu Lys Asn Glu Arg Tyr
 195 200 205
 Tyr Asn Ala Lys Glu Val Glu Leu Asp Glu Leu Val Tyr Ile Thr Ser
 210 215 220
 Asp Asn Asp Leu Thr Val Tyr Asn Met Tyr Lys Asn Asn Glu Ile Asp
 225 230 235 240
 Ala Ile Phe Asn Ser Ile Pro Pro Asp Ile Val Asn Glu Ile Lys Leu
 245 250 255
 Gln Lys Asp Tyr Tyr Gln His Lys Ser Asn Ala Ile Tyr Leu Tyr Ser
 260 265 270
 Phe Asn Thr Lys Ile Lys Pro Leu Asp Asp Ala Arg Val Arg Glu Ala
 275 280 285
 Leu Thr Leu Ala Ile Asp Arg Glu Thr Leu Thr Tyr Lys Val Leu Asn
 290 295 300
 Asp Gly Thr Val Pro Thr Arg Glu Ile Thr Pro Asp Leu Lys Asn Tyr
 305 310 315 320
 Asn Tyr Gly Lys Lys Leu Ala Leu Phe Asp Pro Glu Lys Ser Lys Lys
 325 330 335
 Leu Leu Ala Asp Ala Gly Tyr Pro Asn Gly Lys Gly Phe Pro Met Leu
 340 345 350
 Thr Leu Lys Tyr Asn Thr Asn Glu Thr His Lys Lys Ile Ala Ala Phe
 355 360 365
 Ile Gln Asn Gln Trp Lys Lys Ile Leu Asn Ile Asn Leu Met Leu Thr
 370 375 380
 Asn Glu Asn Trp Pro Val Leu Thr Asn Ser Arg Asn Thr Gly Asn Phe
 385 390 395 400

Glu Ile Ile Arg Val Gly Arg Ile Gly Glu Tyr Leu Asp Pro His Thr
 405 410 415
 Tyr Phe Thr Ile Phe Thr Arg Glu Asn Ser Gln Leu Ala Ser Tyr Gly
 420 425 430
 Tyr Ser Asn Leu Glu Phe Asp Lys Leu Ile Arg Glu Ser Asp Leu Glu
 435 440 445
 Lys Asp Pro Ile Lys Arg Lys Gln Leu Leu Arg Lys Ala Glu Ser Ile
 450 455 460
 Ile Ile Glu Lys Asp Phe Pro Ala Ala Pro Ile Tyr Ile Tyr Ser Gly
 465 470 475 480
 His Tyr Leu Phe Arg Asn Asp Lys Trp Thr Gly Trp Asn Pro Asn Val
 485 490 495
 Ser Glu Val Tyr Tyr Leu Ser Glu Leu Lys Pro Ile Lys Asn Ala Lys
 500 505 510

His Asn

<210> 431

<211> 1626

<212> DNA

<213> Homo sapiens

<400> 431

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 gtatacatag ggggagcgcc ctcatcgctt gaccctcatt tggtagatga gacaatagga 180
 gcaagaattt tagaacaat attctcaggg cttttgacat taaataccaa aacaggaaaag 240
 ctaaagcccg gacttgctaa aaattgggaa gcctcaaaag ataaaaaac atatcaattt 300
 tatctaaggg acaacctttt ttggagcgat ggagttgaaa ttaccgctga agggataaga 360
 aaatcttttt taagaatttt aaataaagaa acaggatcta caaatgttga catgctcaaa 420
 tcaataataa aaaatggaca agagtatttt gacgggaaag tatccgattc tgaacttggg 480
 atcaaggcaa ttgatagtaa aacgctggaa ataacactta cggcccaaaa gccatatttt 540
 cttgaactgc ttctacatta cgcattcatg ccagtaccta ttcattgtgat tgaaaaatat 600
 aagggaaatt ggacaagccc tgaaaacatg gttactagcg gtccttttaa attaaaaaaa 660
 agattaccta atgaaaaaat tatctttgaa aaaaacgaac gttattataa tgcaaaagaa 720
 gtagaacttg atgagcttgt ctacattacg tctgacaatg atcttactgt gtacaatatg 780
 tacaaaaaca acgaaattga tgctattttt aacagcatcc cgccggacat tgtaaatgaa 840
 ataaaactac aaaaagacta ttaccaacac aaaagtaatg caattttatt atattcattt 900
 aatacaaaaa taaaaccctt tgatgatgct agagttagag aagctttaac cttagctatt 960
 gacagagaaa ctttaactta caaagtgcata aatgatggca cagttcctac aagagaaata 1020
 actcctgatc ttaaaaatta caattacggg aaaaaattgg ctttatttga tcctgaaaaa 1080
 tctaaaaagc ttttggcaga tgcagggtat cctaattggga aaggattccc aatgctaaca 1140
 ctaaaatata atacaaacga aactcataaa aaaattgctg cattttattca aaaccaatgg 1200
 aaaaaaattc taaatatcaa tcttatgctt accaacgaaa attggcctgt tcttaccac 1260
 agcagaataa ctggcaattt tgaaataata agagttggac gcattgggga atatttagat 1320
 ccacacacat actttactat attcacaaga gaaaattcac aacttgcata atacggatat 1380
 tcaaacctag aatttgacaa actcatcaga gaatcagatc ttgaaaaaga tcctataaaa 1440
 agaaaacaat tactcagaaa agcagaatca ataataattg aaaaagattt tcctgctgca 1500
 ccaatatata tatattctgg gcattatctt tttagaaacg ataaatggac tggatggaat 1560
 cctaattgtat cagaggttta ttatctttct gaattaaaaa caattaaaaa tgcaaaacat 1620
 aattaa 1626

<210> 432

<211> 1545
 <212> DNA
 <213> Homo sapiens

<400> 432
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 tcatcgcttg accctcattt ggtagatgag acaataggag caagaatttt agaacaaata 120
 ttctcagggc ttttgacatt aaataccaaa acaggaaagc taaagcccg acttgctaaa 180
 aattgggaag cctcaaaaga taaaaaaaca tatcaatttt atctaaggga caaccttttt 240
 tggagcgatg gagttgaaat taccgctgaa gggataagaa aatctttttt aagaatttta 300
 aataaagaaa caggatctac aaatgttgac atgctcaaat caataataaa aaatggacaa 360
 gagtattttg acgggaaagt atccgattct gaacttggaa tcaaggcaat tgatagtaaa 420
 acgctggaaa taacacttac ggcccccagg ccatattttc ttgaaactgct tctacattac 480
 gcattcatgc cagtacctat tcatgtgatt gaaaaatata agggaaattg gacaagccct 540
 gaaaacatgg ttactagcgg tccttttttaa ttaaaaaaaa gattacctaa tgaaaaaatt 600
 atctttgaaa aaaacgaacg ttattataat gcaaaagaag tagaacttga tgagcttgct 660
 tacattacgt ctgacaatga tcttactgtg tacaatatgt acaaaaacaa cgaaattgat 720
 gctattttta acagcatccc gccggacatt gtaaatgaaa taaaactaca aaaagactat 780
 taccacacaa aaagtaatgc aattttatta tattcattta atacaaaaat aaaaccctt 840
 gatgatgcta gagttagaga agctttaacc ttagctattg acagagaaac tttaacttac 900
 aaagtgctaa atgatggcac agttcctaca agagaaataa ctctgatct taaaaattac 960
 aattacggta aaaaattggc tttatttgat cctgaaaaat ctaaaaagct tttggcagat 1020
 gcagggtatc ctaatgggaa aggattccca atgctaacac taaaatataa taaaaacgaa 1080
 actcataaaa aaattgctgc atttattcaa aaccaatgga aaaaaattct aaatatcaat 1140
 cttatgctta ccaacgaaaa ttggcctgtt cttaccaaca gcagaaatac tggcaatttt 1200
 gaaataataa gagttggacg cattggggaa tatttagatc cacacacata ctttactata 1260
 ttcacaagag aaaattcaca acttgcacat tacggatatt caaacctaga atttgacaaa 1320
 ctcatcagag aatcagatct tgaaaaagat cctataaaaa gaaaacaatt actcagaaaa 1380
 gcagaatcaa taataattga aaaagatttt cctgctgcac caatatacat atattctggg 1440
 cattatcttt ttagaaacga taaatggact ggatggaatc ctaatgtatc agagggtttat 1500
 tatctttctg aattaaaacc aattaaaaat gcaaaacata attaa 1545

<210> 433
 <211> 279
 <212> PRT
 <213> Homo sapiens

<400> 433
 Met Lys Lys Val Ile Ile Leu Ile Phe Met Leu Ser Thr Ser Leu Leu
 1 5 10 15
 Tyr Asn Cys Lys Asn Gln Asp Asn Glu Lys Ile Val Ser Ile Gly Gly
 20 25 30
 Ser Thr Thr Val Ser Pro Ile Leu Asp Glu Met Ile Leu Arg Tyr Asn
 35 40 45
 Lys Ile Asn Asn Asn Thr Lys Val Thr Tyr Asp Ala Gln Gly Ser Ser
 50 55 60
 Val Gly Ile Asn Gly Leu Phe Asn Lys Ile Tyr Lys Ile Ala Ile Ser
 65 70 75 80
 Ser Arg Asp Leu Thr Lys Glu Glu Ile Glu Gln Gly Ala Lys Glu Thr
 85 90 95
 Val Phe Ala Tyr Asp Ala Leu Ile Phe Ile Thr Ser Pro Glu Ile Lys
 100 105 110
 Ile Thr Asn Ile Thr Glu Glu Asn Leu Ala Lys Ile Leu Asn Gly Glu

115	120	125
Ile Gln Asn Trp Lys Gln Val Gly Gly Pro Asp Ala Lys Ile Asn Phe 130 135 140		
Ile Asn Arg Asp Ser Ser Ser Gly Ser Tyr Ser Ser Ile Lys Asp Leu 145 150 155 160		
Leu Leu Asn Lys Ile Phe Lys Thr His Glu Glu Ala Gln Phe Arg Gln 165 170 175		
Asp Gly Ile Val Val Lys Ser Asn Gly Glu Val Ile Glu Lys Thr Ser 180 185 190		
Leu Thr Pro His Ser Ile Gly Tyr Ile Gly Leu Gly Tyr Ala Lys Asn 195 200 205		
Ser Ile Glu Lys Gly Leu Asn Ile Leu Ser Val Asn Ser Thr Tyr Pro 210 215 220		
Thr Lys Glu Thr Ile Asn Ser Asn Lys Tyr Thr Ile Lys Arg Asn Leu 225 230 235 240		
Ile Ile Val Thr Asn Asn Lys Tyr Glu Asp Lys Ser Val Thr Gln Phe 245 250 255		
Ile Asp Phe Met Thr Ser Ser Thr Gly Gln Asp Ile Val Glu Glu Gln 260 265 270		
Gly Phe Leu Gly Ile Lys Thr 275		

<210> 434
 <211> 261
 <212> PRT
 <213> Homo sapiens

<400> 434

Cys Lys Asn Gln Asp Asn Glu Lys Ile Val Ser Ile Gly Gly Ser Thr 1 5 10 15
Thr Val Ser Pro Ile Leu Asp Glu Met Ile Leu Arg Tyr Asn Lys Ile 20 25 30
Asn Asn Asn Thr Lys Val Thr Tyr Asp Ala Gln Gly Ser Ser Val Gly 35 40 45
Ile Asn Gly Leu Phe Asn Lys Ile Tyr Lys Ile Ala Ile Ser Ser Arg 50 55 60
Asp Leu Thr Lys Glu Glu Ile Glu Gln Gly Ala Lys Glu Thr Val Phe 65 70 75 80
Ala Tyr Asp Ala Leu Ile Phe Ile Thr Ser Pro Glu Ile Lys Ile Thr 85 90 95
Asn Ile Thr Glu Glu Asn Leu Ala Lys Ile Leu Asn Gly Glu Ile Gln 100 105 110
Asn Trp Lys Gln Val Gly Gly Pro Asp Ala Lys Ile Asn Phe Ile Asn

115 120 125

Arg Asp Ser Ser Ser Gly Ser Tyr Ser Ser Ile Lys Asp Leu Leu Leu
130 135 140

Asn Lys Ile Phe Lys Thr His Glu Glu Ala Gln Phe Arg Gln Asp Gly
145 150 155 160

Ile Val Val Lys Ser Asn Gly Glu Val Ile Glu Lys Thr Ser Leu Thr
165 170 175

Pro His Ser Ile Gly Tyr Ile Gly Leu Gly Tyr Ala Lys Asn Ser Ile
180 185 190

Glu Lys Gly Leu Asn Ile Leu Ser Val Asn Ser Thr Tyr Pro Thr Lys
195 200 205

Glu Thr Ile Asn Ser Asn Lys Tyr Thr Ile Lys Arg Asn Leu Ile Ile
210 215 220

Val Thr Asn Asn Lys Tyr Glu Asp Lys Ser Val Thr Gln Phe Ile Asp
225 230 235 240

Phe Met Thr Ser Ser Thr Gly Gln Asp Ile Val Glu Glu Gln Gly Phe
245 250 255

Leu Gly Ile Lys Thr
260

<210> 435
<211> 840
<212> DNA
<213> Homo sapiens

<400> 435
atgaaaaaag ttattatctt aattttttatg ctatcaacaa gtttattata caactgtaaa 60
aatcaagaca atgaaaaaat tgtatcaatt ggaggatcta caactgtaag cccaatacta 120
gacgaaatga ttttaagata taataaaaata aacaataata ctaaagtaac atacgatgca 180
caaggaagta gtgttggcat aaacgggcta ttttaacaaaa tatataaaat agcaatatca 240
tcaagagatt taacaaaaga agaaattgaa caagggggcaa aagaaactgt atttgcttat 300
gatgcttttaa ttttcattac aagccctgaa ataaaaatta caaatattac agaagaaaat 360
ctagctaaaa tactaaatgg agaaattcaa aattggaaac aagtgggagg tctgatgct 420
aaaatcaact ttatcaatcg agactcttct tctggttctt attcgtctat aaaagacct 480
cttcttaata aaatattcaa aactcacgaa gaagctcaat ttagacaaga cggaatagtg 540
gtaaaatcta atggagaggt aattgaaaaa acaagcctta ctccccactc aataggatat 600
atagggtcttg gatacgcaaa aaattcaata gaaaagggtt tgaatattct ttctgttaac 660
agcacatatc ctacaaaaga aacaataaat agcaataaat acaccattaa aagaaattta 720
ataatagtta caaataacaa atacgaggat aaaagcgtaa ctcaatttat tgatttcatg 780
acaagctcaa ctggacaaga tattgttgaa gaacaaggct ttttagggat aaaaacataa 840

<210> 436
<211> 786
<212> DNA
<213> Homo sapiens

<400> 436
tgtaaaaaatc aagacaatga aaaaattgta tcaattggag gatctacaac tgtaagccca 60
atactagacg aatgattttt aagatataat aaaataaaca ataatactaa agtaacatac 120
gatgcacaag gaagtagtgt tggcataaac gggctattta acaaaatata taaaatagca 180
atatcatcaa gagatttaac aaaagaagaa attgaacaag gggcaaaaga aactgtattt 240

gcttatgatg ctttaatttt cattacaagc cctgaaataa aaattacaaa tattacagaa 300
gaaaatctag ctaaaatact aaatggagaa attcaaaatt ggaaacaagt gggagggtcct 360
gatgctaaaa tcaactttat caatcgagac ttttcttctg gttcttattc gtctataaaa 420
gacctacttc ttaataaaaat attcaaaact cacgaagaag ctcaatttag acaagacgga 480
atagtggtaa aatctaattg agaggtaatt gaaaaaacia gccttactcc cactcaata 540
ggatatatag gtcttgata cgcaaaaaat tcaatagaaa aggggttgaa tattctttct 600
gttaacagca catatcctac aaaagaaaca ataatagca ataaatacac cattaaga 660
aatttaataa tagttacaaa taacaaatac gaggataaaa gcgtaactca atttattgat 720
ttcatgacaa gctcaactgg acaagatatt gttgaagaac aaggcttttt agggataaaa 780
acataa 786

<210> 437

<211> 508

<212> PRT

<213> Homo sapiens

<400> 437

Met Asn Lys Lys Leu Asn Glu Val Leu Leu Lys Leu Asp Gln Asp Leu
1 5 10 15

Ile Lys Cys Val Lys Gly Ser Leu Asp Leu Glu Ile Ser Gly Val Thr
20 25 30

Tyr Ser Ser Lys Leu Val Leu Pro Arg Phe Val Phe Phe Ala Leu Pro
35 40 45

Gly Ile His Phe Asp Gly His Asp Phe Ile Glu Ile Ala Ile Gln Lys
50 55 60

Gly Ser Asn Val Val Val Cys Ser Arg Asp Val Asp Phe Tyr Ser Pro
65 70 75 80

Asn Val Thr Tyr Ile Lys Val Asp Asp Phe Asn Ile Arg Lys Phe Met
85 90 95

Ser Asn Phe Ser Asn Ile Phe Tyr Asp Glu Pro Ser Lys Lys Leu Lys
100 105 110

Val Ile Gly Val Thr Gly Thr Asp Gly Lys Ser Ser Val Cys Tyr Tyr
115 120 125

Ile Tyr Leu Leu Phe Lys Lys Lys Gly Val Lys Val Gly Phe Ile Ser
130 135 140

Thr Val Phe Phe Asp Asp Gly Ser Gly Ser Leu Ile Lys Asn Pro Tyr
145 150 155 160

Arg Gln Ser Thr Pro Glu Ser Thr Glu Ile His Ser Phe Leu Ser Thr
165 170 175

Met Val Lys Asn Glu Ala Gln Tyr Ala Ile Leu Glu Ser Thr Ser His
180 185 190

Gly Leu Asp Leu Glu Thr Ala Arg Leu Ile Asp Val Asn Tyr Phe Ala
195 200 205

Val Val Phe Thr Asn Ile Gly His Glu His Leu Glu Phe His Gly Thr
210 215 220

Ile Gln Asn Tyr Leu Asn Val Lys Leu Gly Leu Phe Arg Ser Val Ser

1	5	10	15
Ser Lys Leu Val Leu Pro Arg Phe Val Phe Phe Ala Leu Pro Gly Ile	20	25	30
His Phe Asp Gly His Asp Phe Ile Glu Ile Ala Ile Gln Lys Gly Ser	35	40	45
Asn Val Val Val Cys Ser Arg Asp Val Asp Phe Tyr Ser Pro Asn Val	50	55	60
Thr Tyr Ile Lys Val Asp Asp Phe Asn Ile Arg Lys Phe Met Ser Asn	65	70	75
Phe Ser Asn Ile Phe Tyr Asp Glu Pro Ser Lys Lys Leu Lys Val Ile	85	90	95
Gly Val Thr Gly Thr Asp Gly Lys Ser Ser Val Cys Tyr Tyr Ile Tyr	100	105	110
Leu Leu Phe Lys Lys Lys Gly Val Lys Val Gly Phe Ile Ser Thr Val	115	120	125
Phe Phe Asp Asp Gly Ser Gly Ser Leu Ile Lys Asn Pro Tyr Arg Gln	130	135	140
Ser Thr Pro Glu Ser Thr Glu Ile His Ser Phe Leu Ser Thr Met Val	145	150	155
Lys Asn Glu Ala Gln Tyr Ala Ile Leu Glu Ser Thr Ser His Gly Leu	165	170	175
Asp Leu Glu Thr Ala Arg Leu Ile Asp Val Asn Tyr Phe Ala Val Val	180	185	190
Phe Thr Asn Ile Gly His Glu His Leu Glu Phe His Gly Thr Ile Gln	195	200	205
Asn Tyr Leu Asn Val Lys Leu Gly Leu Phe Arg Ser Val Ser Asp Asp	210	215	220
Ala Gly Phe Gly Val Ile Asn Leu Asp Asp Leu Tyr Ser Ser Asp Phe	225	230	235
Lys Asn Ala Val Lys Lys Ser Phe Thr Tyr Ser Leu Lys Ser Ser Lys	245	250	255
Ala Asp Phe Phe Val Ser Phe Ile Asp Glu Lys Thr Asp Ser Thr Arg	260	265	270
Phe Glu Phe Tyr His Lys Gly Val Lys Tyr Leu Ala Asn Val Ser Leu	275	280	285
Leu Gly Ser Phe Asn Val Glu Asn Val Met Ala Ala Leu Ile Leu Val	290	295	300
Ser Gln Ile Leu Asn Ile Asp Ile Gln Asp Ile Val Asp Lys Leu Asn	305	310	315
Cys Ile Lys Ser Leu Asp Gly Arg Met Asp Ser Ile Asn Leu Gly Gln			

	325		330		335
Asn Phe Ser Val Ile Ile Asp Tyr Ala His Thr Pro Gly Ala Phe Ser	340		345		350
Lys Leu Phe Pro Ile Phe Lys Arg Phe Ala Thr Asn Arg Leu Ile Ser	355		360		365
Val Phe Gly Ser Ala Gly Glu Arg Asp Val Glu Lys Arg Phe Leu Gln	370		375		380
Gly Gln Ile Ala Asp Ile Tyr Ser Asp Leu Ile Ile Leu Cys Asp Glu	385		390		395
Asp Pro Arg Gly Glu Asn Ser Met Cys Ile Ile Lys Asp Ile Ala Lys	405		410		415
Gly Ile Val Asn Lys Val Glu Asn Lys Asp Leu Phe Phe Ile Ala Asp	420		425		430
Arg Lys Gln Ala Ile Glu Lys Ala Ile Ser Leu Ala Lys Ala Gly Asp	435		440		445
Leu Val Val Ala Leu Gly Lys Gly His Glu Ser Ser Ile Ile Tyr Lys	450		455		460
Asn Arg Glu Val Phe Trp Asn Glu Gln Glu Val Val Lys Asn Ala Ile	465		470		475
					480
Leu Ser Leu Glu Lys Ser Glu Lys Glu Lys	485		490		

<210> 439

<211> 1527

<212> DNA

<213> Homo sapiens

<400> 439

atgaataaaa	aacttaatga	agtttttatta	aagtttagatc	aagattttaat	aaaatgtgta	60
aaagggttctc	ttgatttaga	aatatcagga	gttacttata	gttctaaatt	ggttttgccc	120
aggtttggtgt	tttttgctct	tccaggaatt	cattttgatg	ggcatgattt	tattgaaatt	180
gcaattcaaa	agggtagtaa	tggtgttggtg	tggtcacgag	atgtggattt	ttacagtcct	240
aatgttactt	atattaaggt	agatgacttt	aacataagaa	aatttatgtc	taatttttca	300
aatattttttt	atgatgagcc	ttcaaaaaaa	ttaaaagtta	ttggagtcac	tggcactgac	360
gggaaaagtt	ctgtttggtta	ttatatatat	cttcttttta	aaaaaaaggg	tgttaaagta	420
ggttttatat	cgacagtatt	ttttgatgat	gggagtggaa	gcttgattaa	aaatccttac	480
agacaatcaa	ctcccagatc	tacggaaata	cattcatttt	taagcaccat	ggttaaaaat	540
gaagctcaat	atgcaattct	tgaatctact	tctcatgggc	ttgaccttga	aacagcaagg	600
cttattgatg	ttaattattt	tgcagttggt	tttaccaata	ttggacatga	gcactctgaa	660
tttcatggca	caattcaaaa	ttatttgaat	gtcaagctgg	gtctttttcg	gtctgttagt	720
gatgatgctg	gttttggggt	tattaatctt	gatgaccttt	attcttctga	ttttaagaat	780
gctgttaaga	aatctttttac	ttatagctta	aaaagcagta	aagcggattt	ttttgttagt	840
tttattgatg	agaaaaccga	ttctactaga	tttgaatttt	atcacaaggg	ggttaaatat	900
cttgctaattg	ttagcctact	ggggagtgtt	aatgttgaga	atgtaatggc	tgctcttatt	960
ttagtttctc	aaatttttaa	tatcgatatt	caagatatgt	ttgataaact	taactgcatt	1020
aaaagtcttg	atgggcgtat	ggatagtatt	aatttggggc	aaaatttttc	tgtaataatt	1080
gattatgctc	atactcctgg	tgctttttcc	aagctttttc	ctatttttaa	aagatttgct	1140
accaatagat	tgatttctgt	ttttggctct	gcaggagaaa	gagatgttga	aaaaagattt	1200
ttgcaagggc	aaatcgcaga	tatttattct	gatttaataa	tactttgcga	tgaagatcca	1260
agagggcgaga	atagtatgtg	tataattaaa	gacattgcaa	aaggaattgt	aaataaagtt	1320

gaaaataagg atttattttt tattgctgat agaaagcagg ctattgaaaa agcaataagt 1380
 cttgcaaaag caggagattt ggttggttgct ttggggcaaa gtcatagaaag ttcaataatt 1440
 tataaaaaata gagaagtttt ttggaatgaa caagaggtag ttaaaaaatgc tatttttaagt 1500
 ttagaaaaat cagaaaagga gaagtga 1527

<210> 440
 <211> 1473
 <212> DNA
 <213> Homo sapiens

<400> 440
 tgtgtaaaaag gttctcttga tttagaaata tcaggagtta cttatagttc taaattgggtt 60
 ttgcccagggt ttgtgttttt tgctcttcca ggaattcatt ttgatgggca tgattttatt 120
 gaaattgcaa ttcaaaaggg tagtaatggt gttgtgtggt cacgagatgt ggatttttac 180
 agtcctaagt ttacttatat taaggtagat gactttaaca taagaaaatt tatgtctaata 240
 ttttcaaata ttttttatga tgagccttca aaaaaattaa aagttattgg agtcaactggc 300
 actgacggga aaagtctctgt ttgttattat atatatcttc tttttaaaaa aaaggggtgtt 360
 aaagtagggt ttatatcgac agtatttttt gatgatggga gtggaagctt gattaaaaat 420
 ccttacagac aatcaactcc cgagtctacg gaaatacatt cattttttaag caccatgggtt 480
 aaaaatgaag ctcaatatgc aattcttgaa tctacttctc atgggcttga ccttgaaaca 540
 gcaaggctta ttgatgttaa ttattttgca gttgttttta ccaatattgg acatgagcat 600
 cttgaatttc atggcacaat tcaaaattat ttgaatgtca agctgggtct ttttcggtct 660
 gttagtgatg atgctgggtt tgggggttatt aatcttgatg acctttattc ttctgatttt 720
 aagaatgctg ttaagaaatc ttttacttat agcttaaaaa gcagtaaagc ggattttttt 780
 gttagtttta ttgatgagaa aaccgattct actagatttg aattttatca caaggggggtt 840
 aaatatcttg ctaatgttag cctactgggg agttttaatg ttgagaatgt aatggctgct 900
 cttatttttag tttctcaaat tttaaatatc gatattcaag atattgttga taaacttaac 960
 tgcattaaaa gtcttgatgg gcgtatggat agtattaatt tggggcaaaa tttttctgta 1020
 ataattgatt atgctcatac tcttggtgct ttttccaagc tttttcctat ttttaaaaga 1080
 tttgctacca atagattgat ttctgttttt ggctctgcag gagaaagaga tgttgaaaaa 1140
 agatttttgc aaggggcaaat cgcagatatt tattctgatt taataatact ttgcgatgaa 1200
 gatccaagag gcgagaatag tatgtgtata attaaagaca ttgcaaaagg aattgtaaat 1260
 aaagttgaaa ataaggattt attttttatt gctgatagaa agcagggtat tgaaaaagca 1320
 ataagtcttg caaaagcagg agatttggtt gttgctttgg gcaaagggtca tgaaagttca 1380
 ataatttata aaaatagaga agtttttttg aatgaacaag aggtagttaa aaatgctatt 1440
 ttaagtttag aaaaatcaga aaaggagaag tga 1473

<210> 441
 <211> 238
 <212> PRT
 <213> Homo sapiens

<400> 441
 Met Val Phe Arg Thr Tyr Lys His Leu Glu Leu Ile Met Leu Pro Met
 1 5 10 15
 Leu Met Leu Ser Cys Ala Phe Phe Lys Lys Pro Gln Ser Val His Gln
 20 25 30
 Asp Ser Asn Thr Gly Lys Pro Ile Ser Asp Glu Lys Leu His Leu Ile
 35 40 45
 Ser Gly Lys Ile Ser Asn Lys Lys Leu Pro Ile Ile Asn Ser Asn His
 50 55 60
 Asp Val Thr Trp Ile Lys Thr Lys Ala Met Thr Ile Leu Gly Glu Asp
 65 70 75 80
 Gly Lys Glu Ile Pro Glu Phe Lys Asn Lys Phe Gly Tyr Ser Tyr Ile
 85 90 95

Ile Ser Pro Val Lys Met Asp Gly Lys Tyr Ser Tyr Tyr Ala Ser Leu
 100 105 110

Leu Ile Leu Phe Glu Thr Thr Lys Asn Gly Asp Asp Glu Tyr Glu Ile
 115 120 125

Glu Asp Val Lys Phe Val Thr Ala Gly Ser Thr Leu Glu Leu Lys Asn
 130 135 140

Ser Leu Leu Ala Val Glu Asn Ser Gln Glu Glu Gly Tyr Val Thr Ala
 145 150 155 160

Tyr Pro Phe Gly Ile Leu Met Ser Asp Glu Ile Lys Asn Ala Phe Lys
 165 170 175

Leu Thr Tyr Lys Asn Gly His Trp Asn Tyr Met Leu Ala Asp Leu Thr
 180 185 190

Val Lys Asn Lys Leu Thr Gln Glu Thr Lys Ile Tyr Lys Ile Ser Leu
 195 200 205

Asn Ser Lys Leu Ile Ile Glu Phe Leu Lys Glu Val Leu Lys Glu Asn
 210 215 220

Ser Ile Leu Lys Asp Ile Ala Gly Asp Leu Phe Glu Asp Ile
 225 230 235

<210> 442
 <211> 218
 <212> PRT
 <213> Homo sapiens

<400> 442
 Cys Ala Phe Phe Lys Lys Pro Gln Ser Val His Gln Asp Ser Asn Thr
 1 5 10 15

Gly Lys Pro Ile Ser Asp Glu Lys Leu His Leu Ile Ser Gly Lys Ile
 20 25 30

Ser Asn Lys Lys Leu Pro Ile Ile Asn Ser Asn His Asp Val Thr Trp
 35 40 45

Ile Lys Thr Lys Ala Met Thr Ile Leu Gly Glu Asp Gly Lys Glu Ile
 50 55 60

Pro Glu Phe Lys Asn Lys Phe Gly Tyr Ser Tyr Ile Ile Ser Pro Val
 65 70 75 80

Lys Met Asp Gly Lys Tyr Ser Tyr Tyr Ala Ser Leu Leu Ile Leu Phe
 85 90 95

Glu Thr Thr Lys Asn Gly Asp Asp Glu Tyr Glu Ile Glu Asp Val Lys
 100 105 110

Phe Val Thr Ala Gly Ser Thr Leu Glu Leu Lys Asn Ser Leu Leu Ala
 115 120 125

Val Glu Asn Ser Gln Glu Glu Gly Tyr Val Thr Ala Tyr Pro Phe Gly
 130 135 140

Ile Leu Met Ser Asp Glu Ile Lys Asn Ala Phe Lys Leu Thr Tyr Lys
 145 150 155 160
 Asn Gly His Trp Asn Tyr Met Leu Ala Asp Leu Thr Val Lys Asn Lys
 165 170 175
 Leu Thr Gln Glu Thr Lys Ile Tyr Lys Ile Ser Leu Asn Ser Lys Leu
 180 185 190
 Ile Ile Glu Phe Leu Lys Glu Val Leu Lys Glu Asn Ser Ile Leu Lys
 195 200 205
 Asp Ile Ala Gly Asp Leu Phe Glu Asp Ile
 210 215

<210> 443
 <211> 717
 <212> DNA
 <213> Homo sapiens

<400> 443
 atggtatttta gaacatataa acatttggaa ctaataatgc tgcccatgtt aatgctgagt 60
 tgcgctttttt ttaagaaacc acaatctgta catcaagaca gcaatactgg caaaccaata 120
 agcgatgaaa aattacattt aatatcaggc aaaatttcaa ataaaaaatt gccaatcata 180
 aatagtaatc atgacgtaac ttggataaaa acaaaggcaa tgacaatctt aggcgagat 240
 ggaaaagaaa taccagaatt taaaaacaaa tttggatatt cttatataat atctcctgta 300
 aaaatggatg gaaaatatag ttattacgcg tcattattaa tactttttga aacaactaaa 360
 aatggagatg atgaatatga aattgaagat gttaaatttg taacagctgg ttccacccta 420
 gaacttaaaa attctctttt agctgttgaa aattcacaag aagaaggata tgttactgca 480
 taccattttg gaattattgat gagtgacgag attaaaaatg cttttaaatt aacatataaa 540
 aatggtcatt ggaattatat gcttgcagat ttaactgtca aaaataaact tactcaagaa 600
 actaaaattt ataaaatttc tcttaattca aaattaatta ttgaattttt aaaagaagtg 660
 ctaaaagaaa attctatatt aaaagacata gctggagatt tatttgaaga tatataa 717

<210> 444
 <211> 657
 <212> DNA
 <213> Homo sapiens

<400> 444
 tgcgctttttt ttaagaaacc acaatctgta catcaagaca gcaatactgg caaaccaata 60
 agcgatgaaa aattacattt aatatcaggc aaaatttcaa ataaaaaatt gccaatcata 120
 aatagtaatc atgacgtaac ttggataaaa acaaaggcaa tgacaatctt aggcgagat 180
 ggaaaagaaa taccagaatt taaaaacaaa tttggatatt cttatataat atctcctgta 240
 aaaatggatg gaaaatatag ttattacgcg tcattattaa tactttttga aacaactaaa 300
 aatggagatg atgaatatga aattgaagat gttaaatttg taacagctgg ttccacccta 360
 gaacttaaaa attctctttt agctgttgaa aattcacaag aagaaggata tgttactgca 420
 taccattttg gaattattgat gagtgacgag attaaaaatg cttttaaatt aacatataaa 480
 aatggtcatt ggaattatat gcttgcagat ttaactgtca aaaataaact tactcaagaa 540
 actaaaattt ataaaatttc tcttaattca aaattaatta ttgaattttt aaaagaagtg 600
 ctaaaagaaa attctatatt aaaagacata gctggagatt tatttgaaga tatataa 657

<210> 445
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 445
 Met Leu Arg Lys Leu Lys Asp Ile Ser Lys Ile Val Leu Val Thr Asp

1 5 10 15
 Gly Leu Thr Pro Asn Cys Gln Thr Cys Gly Lys Leu Ile Ala Asn Gly
 20 25 30
 Asp Glu Val Tyr Ile Ala Glu Asp Gly Leu Phe His Ser Val Lys Ser
 35 40 45
 Asn Thr Ile Ala Gly Ser Thr Leu Thr Met Ile Gln Gly Leu Lys Asn
 50 55 60
 Leu Ile Glu Phe Gly Phe Ser Leu Ser Asp Ala Val Gln Ala Ser Ser
 65 70 75 80
 Tyr Asn Pro Thr Arg Ile Leu Asn Ile Asp Lys Lys Gly Leu Ile Cys
 85 90 95
 His Gly Tyr Asp Ala Asn Leu Asn Val Leu Asp Lys Asp Phe Asn Leu
 100 105 110
 Lys Leu Thr Met Ile Glu Ser Lys Ile Ile Phe Asn Asn Leu
 115 120 125

<210> 446
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 446
 Cys Gln Thr Cys Gly Lys Leu Ile Ala Asn Gly Asp Glu Val Tyr Ile
 1 5 10 15
 Ala Glu Asp Gly Leu Phe His Ser Val Lys Ser Asn Thr Ile Ala Gly
 20 25 30
 Ser Thr Leu Thr Met Ile Gln Gly Leu Lys Asn Leu Ile Glu Phe Gly
 35 40 45
 Phe Ser Leu Ser Asp Ala Val Gln Ala Ser Ser Tyr Asn Pro Thr Arg
 50 55 60
 Ile Leu Asn Ile Asp Lys Lys Gly Leu Ile Cys His Gly Tyr Asp Ala
 65 70 75 80
 Asn Leu Asn Val Leu Asp Lys Asp Phe Asn Leu Lys Leu Thr Met Ile
 85 90 95
 Glu Ser Lys Ile Ile Phe Asn Asn Leu
 100 105

<210> 447
 <211> 381
 <212> DNA
 <213> Homo sapiens

<400> 447
 atgcttagaa agcttaaaga tataagtaaa atagtccttg taactgacgg acttactccg 60
 aattgtcaaaa cttgtggaaa actaattgca aacggagacg aagtttatat tgcagaagat 120
 ggattattcc atagcgtgaa aagcaacaca atagctggat caacactcac aatgatacaa 180
 ggtcttaaaa atttaataga atttggtttc agcttaagcg atgctgttca agcaagctct 240

tacaatccaa caagaattct caatattgat aaaaagggct taatatgtca tggatatgat 300
gcaaacctca atgtcctaga taaagatttt aatctaaagt taacaatgat agaatctaaa 360
ataattttta acaatctcta a 381

<210> 448
<211> 318
<212> DNA
<213> Homo sapiens

<400> 448
tgtcaaactt gtggaaaact aattgcaaac ggagacgaag tttatattgc agaagatgga 60
ttattccata gcgtgaaaag caacacaata gctggatcaa cactcacaat gatacaaggt 120
cttaaaaatt taatagaatt tggtttcagc ttaagcgatg ctgttcaagc aagctcttac 180
aatccaacaa gaattctcaa tattgataaa aagggcttaa tatgtcatgg atatgatgca 240
aacctcaatg tcctagataa agattttaat cttaaagttaa caatgataga atctaaaata 300
atttttaaca atctctaa 318

<210> 449
<211> 230
<212> PRT
<213> Homo sapiens

<400> 449
Met Lys Ile Leu Trp Leu Ile Ile Leu Val Asn Leu Phe Leu Ser Cys
1 5 10 15
Gly Asn Glu Ser Lys Glu Lys Ser Asn Leu Gly Leu Arg Leu Arg Glu
20 25 30
Leu Glu Ile Ser Gly Gly Gly Ser Glu Ser Lys Ile Glu Val Tyr Lys
35 40 45
Glu Phe Ile Glu Lys Glu Asp Lys Asn Ile Leu Lys Ile Val Asn Ser
50 55 60
Ile Asp Lys Lys Ala Arg Phe Phe Asn Leu Ile Gly Leu Glu Phe Phe
65 70 75 80
Lys Leu Gly Gln Tyr Gly Pro Ala Ile Glu Tyr Phe Ala Lys Asn Leu
85 90 95
Glu Ile Asn Pro Asn Asn Tyr Leu Ser His Phe Tyr Ile Gly Val Ala
100 105 110
Ser Tyr Asn Leu Ala Lys Asn Leu Arg Val Lys Asp Glu Val Glu Lys
115 120 125
Tyr Ile Ile Leu Ala Glu Asn Ser Phe Leu Lys Ser Leu Ser Ile Arg
130 135 140
Asp Asp Phe Lys Asp Ser Leu Phe Ala Ile Ser Asn Met Tyr Val Tyr
145 150 155 160
Asp Leu Asp Lys Gln Leu Glu Ala Lys Asn Tyr Leu Asn Lys Leu Gly
165 170 175
Asp Met Gly Glu Asp Tyr Phe Glu Phe Leu Met Leu Arg Gly Ala Asn
180 185 190
Tyr Tyr Ser Leu Gly Asp Leu Gly Asn Ala Ile Leu Phe Tyr Asp Lys

195 200 205
 Ala Ser Lys Lys Ala Ser Thr Glu Glu Gln Lys Glu Gly Val Ser Arg
 210 215 220

 Ile Met Ser Asn Leu Lys
 225 230

 <210> 450
 <211> 215
 <212> PRT
 <213> Homo sapiens

 <400> 450
 Cys Gly Asn Glu Ser Lys Glu Lys Ser Asn Leu Gly Leu Arg Leu Arg
 1 5 10 15

 Glu Leu Glu Ile Ser Gly Gly Gly Ser Glu Ser Lys Ile Glu Val Tyr
 20 25 30

 Lys Glu Phe Ile Glu Lys Glu Asp Lys Asn Ile Leu Lys Ile Val Asn
 35 40 45

 Ser Ile Asp Lys Lys Ala Arg Phe Phe Asn Leu Ile Gly Leu Glu Phe
 50 55 60

 Phe Lys Leu Gly Gln Tyr Gly Pro Ala Ile Glu Tyr Phe Ala Lys Asn
 65 70 75 80

 Leu Glu Ile Asn Pro Asn Asn Tyr Leu Ser His Phe Tyr Ile Gly Val
 85 90 95

 Ala Ser Tyr Asn Leu Ala Lys Asn Leu Arg Val Lys Asp Glu Val Glu
 100 105 110

 Lys Tyr Ile Ile Leu Ala Glu Asn Ser Phe Leu Lys Ser Leu Ser Ile
 115 120 125

 Arg Asp Asp Phe Lys Asp Ser Leu Phe Ala Ile Ser Asn Met Tyr Val
 130 135 140

 Tyr Asp Leu Asp Lys Gln Leu Glu Ala Lys Asn Tyr Leu Asn Lys Leu
 145 150 155 160

 Gly Asp Met Gly Glu Asp Tyr Phe Glu Phe Leu Met Leu Arg Gly Ala
 165 170 175

 Asn Tyr Tyr Ser Leu Gly Asp Leu Gly Asn Ala Ile Leu Phe Tyr Asp
 180 185 190

 Lys Ala Ser Lys Lys Ala Ser Thr Glu Glu Gln Lys Glu Gly Val Ser
 195 200 205

 Arg Ile Met Ser Asn Leu Lys
 210 215

 <210> 451
 <211> 693
 <212> DNA
 <213> Homo sapiens

<400> 451
atgaaaattt tgtgggtaat aattottggt aatttatttt tatcttggtg caatgaatct 60
aaagaaaaat caaatcttgg tcttagatta agagaattgg aaatttcagg tgggtggatct 120
gaatctaaga ttgaagttta taaagaattt attgaaaaag aagataagaa tatttttaaag 180
atagttaatt ccattgataa gaaagccaga ttttttaatt taattgggtct tgaatttttt 240
aagcttggtc agtacggacc tgctattgaa tattttgcta aaaatttaga aatcaatccc 300
aataattatt tatctcattt ttatataggt gttgcttctt ataatttagc taaaaattta 360
agagtaaaag atgaagttga aaaatacata attcttgctg aaaattcctt tttaaaatca 420
ctttcaatta gagatgattt taaagattct ctttttgcca tttctaatat gtacgtatat 480
gatcttgata aacaacttga agctaaaaat tatttaaata aacttggtga tatgggtgag 540
gactattttg agtttttaat gttaagaggt gcaaattatt attcgctggg cgatcttggt 600
aatgctatat tgttttatga taaagctagt aaaaaggctt caactgaaga gcaaaaagaa 660
ggtgtttcta ggatcatgag taatttgaag taa 693

<210> 452
<211> 648
<212> DNA
<213> Homo sapiens

<400> 452
tgtggcaatg aatctaaaga aaaatcaaat cttgggtctta gattaagaga attggaaatt 60
tcagggtggg gatctgaatc taagattgaa gtttataaag aatttattga aaaagaagat 120
aagaatattt taaagatagt taattccatt gataagaaag ccagattttt taattttaatt 180
ggctcttgaat tttttaagct tggtcagtac ggacctgcta ttgaatattt tgctaaaaat 240
ttagaaatca atcccaataa ttatttatct catttttata taggtgttgc ttcttataat 300
ttagctaaaa atttaagagt aaaagatgaa gttgaaaaat acataattct tgctgaaaaat 360
tcttttttaa aatcactttc aattagagat gatttttaag atttcttttt tgccatttct 420
aatatgtacg tatatgatct tgataaaciaa cttgaagcta aaaattattt aaataaactt 480
gggtgatatgg gtgaggacta ttttgagttt ttaatgttaa gaggtgcaaa ttattattcg 540
ctgggcgatc ttggtaatgc tatattgttt tatgataaag ctagtaaaaa ggcttcaact 600
gaagagcaaa aagaaggtgt ttctaggatc atgagtaatt tgaagtaa 648

<210> 453
<211> 265
<212> PRT
<213> Homo sapiens

<400> 453
Met Asn Asn Cys Leu Ile Lys Phe Phe Ile Phe Leu Leu Val Phe Ser
1 5 10 15
Asn Ser Tyr Val Ala Phe Ser Lys Asn Val Asn Val Leu Ile Val Thr
20 25 30
Ala Met Asp Ser Glu Phe Asp Gln Ile Asn Lys Leu Met Ser Asn Lys
35 40 45
Glu Glu Ile Val Leu Lys Glu Tyr Gly Leu Asn Lys Lys Ile Leu Lys
50 55 60
Gly Lys Leu Ser Asn Arg Asn Val Met Val Ile Ile Cys Gly Val Gly
65 70 75 80
Lys Val Asn Ala Gly Val Trp Thr Ser Tyr Ile Leu Ser Lys Tyr Asn
85 90 95
Ile Ser His Val Ile Asn Ser Gly Val Ala Gly Gly Val Val Ser Ala
100 105 110

Lys Tyr Lys Asp Ile Lys Val Gly Asp Val Val Val Ser Ser Glu Val
 115 120 125

Ala Tyr His Asp Val Asp Leu Thr Lys Phe Gly Tyr Lys Val Gly Gln
 130 135 140

Leu Thr Gly Gly Leu Pro Gln Lys Phe Asn Ala Asn Lys Asn Leu Ile
 145 150 155 160

Lys Asn Ala Ile Glu Ala Ile Lys Ser Lys Val Gly Gly Ser Asn Ala
 165 170 175

Tyr Ser Gly Leu Ile Val Ser Gly Asp Gln Phe Ile Asp Pro Thr Tyr
 180 185 190

Ile Asn Lys Ile Ile Gly Asn Phe Lys Asp Val Ile Ala Val Glu Met
 195 200 205

Glu Gly Ala Ala Ile Gly His Val Ser His Met Phe Asn Ile Pro Phe
 210 215 220

Ile Val Ile Arg Ser Ile Ser Asp Ile Val Asn Lys Glu Gly Asn Glu
 225 230 235 240

Val Glu Tyr Ser Lys Phe Ser Lys Ile Ala Ala Phe Asn Ser Ala Lys
 245 250 255

Val Val Gln Glu Ile Leu Arg Lys Leu
 260 265

<210> 454
 <211> 242
 <212> PRT
 <213> Homo sapiens

<400> 454
 Lys Asn Val Asn Val Leu Ile Val Thr Ala Met Asp Ser Glu Phe Asp
 1 5 10 15

Gln Ile Asn Lys Leu Met Ser Asn Lys Glu Glu Ile Val Leu Lys Glu
 20 25 30

Tyr Gly Leu Asn Lys Lys Ile Leu Lys Gly Lys Leu Ser Asn Arg Asn
 35 40 45

Val Met Val Ile Ile Cys Gly Val Gly Lys Val Asn Ala Gly Val Trp
 50 55 60

Thr Ser Tyr Ile Leu Ser Lys Tyr Asn Ile Ser His Val Ile Asn Ser
 65 70 75 80

Gly Val Ala Gly Gly Val Val Ser Ala Lys Tyr Lys Asp Ile Lys Val
 85 90 95

Gly Asp Val Val Val Ser Ser Glu Val Ala Tyr His Asp Val Asp Leu
 100 105 110

Thr Lys Phe Gly Tyr Lys Val Gly Gln Leu Thr Gly Gly Leu Pro Gln
 115 120 125

Lys Phe Asn Ala Asn Lys Asn Leu Ile Lys Asn Ala Ile Glu Ala Ile
 130 135 140
 Lys Ser Lys Val Gly Gly Ser Asn Ala Tyr Ser Gly Leu Ile Val Ser
 145 150 155 160
 Gly Asp Gln Phe Ile Asp Pro Thr Tyr Ile Asn Lys Ile Ile Gly Asn
 165 170 175
 Phe Lys Asp Val Ile Ala Val Glu Met Glu Gly Ala Ala Ile Gly His
 180 185 190
 Val Ser His Met Phe Asn Ile Pro Phe Ile Val Ile Arg Ser Ile Ser
 195 200 205
 Asp Ile Val Asn Lys Glu Gly Asn Glu Val Glu Tyr Ser Lys Phe Ser
 210 215 220
 Lys Ile Ala Ala Phe Asn Ser Ala Lys Val Val Gln Glu Ile Leu Arg
 225 230 235 240

Lys Leu

<210> 455
 <211> 798
 <212> DNA
 <213> Homo sapiens

<400> 455
 atgaataatt gtttaataaa gttttttatt tttttattag ttttttcaaa cagttatggt 60
 gctttttcta aaaatgtcaa tgttttaata gtaactgcta tggactctga gtttgatcag 120
 ataaataagc ttatgtctaa taaggaagaa atagttccta aggagtatgg tcttaataaa 180
 aagattttta aggggaagtt gtctaatacg aatggttatgg ttattatttg tgggggttgg 240
 aagggttaatg ctggtgtgtg gactagctac attttgtcaa aatacaacat aagtcatgtc 300
 attaattctg gcgttgctgg tggcgttggt agtgctaaat acaaagatat taaagtggga 360
 gatgtggtgg tgtcttcaga ggttgcatat catgatgttg atttgactaa atttggtac 420
 aaggtaggac agcttacagg aggattgcct caaaaattta atgccaataa aaatttaatt 480
 aagaatgcca tagaggccat taaatcaaag gttggagggt ctaatgcata ttcaggatta 540
 atagtttcag gagatcagtt tattgatcca acttatatta acaaaattat aggaaacttt 600
 aaagatgtaa tagctgttga gatggaaggt gcagcaatag ggcattgttc tcatatgttt 660
 aatatacctt ttatagttat taggtcaata tctgacattg taaataaaga aggggaatgag 720
 gttgaatata gtaaattttc taaaatagct gctttcaatt cagccaaagt tgtacaagaa 780
 attttaagaa aactttaa 798

<210> 456
 <211> 729
 <212> DNA
 <213> Homo sapiens

<400> 456
 aaaaatgtca atgttttaat agtaactgct atggactctg agtttgatca gataaataag 60
 cttatgtcta ataaggaaga aatagttcct aaggagtatg gtcttaataa aaagatttta 120
 aaggggaagt tgtctaatacg caatgttatg gttattattt gtgggggttg taaggttaat 180
 gctggtgtgt ggactagcta cattttgtca aaatacaaca taagtcatgt cattaattct 240
 ggcgttgctg gtggcgttgt tagtgctaaa tacaaagata ttaaagtggg agatgtggtg 300
 gtgtcttcag aggttgcata tcatgatgtt gatttgacta aatttgata caaggtagga 360
 cagcttacag gaggattgcc tcaaaaattt aatgccaata aaaatttaat taagaatgcc 420
 atagaggcca ttaaatacaa ggttgagggt tctaatagcatt attcaggatt aatagtttca 480
 ggagatcagt ttattgatcc aacttatatt aacaaaatta taggaaactt taaagatgta 540

atagctgttg agatggaagg tgcagcaata gggcatgttt ctcatatggt taatatacct 600
 tttatagtta ttaggtcaat atctgacatt gtaaataaag aagggaatga ggttgaatat 660
 agtaaatttt ctaaaatagc tgctttcaat tcagccaaag ttgtacaaga aattttaaga 720
 aaactttaa 729

<210> 457
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 457
 Met Asn Thr Lys Thr Leu Tyr Leu Ile Ser Leu Ile Leu Leu Ala Cys
 1 5 10 15
 Asn Lys Asn Asn Lys Ile Pro Leu Ile Gln Lys Leu Asp Leu Pro Lys
 20 25 30
 Ser Ser Ile Leu Gly Phe Ser Asn Lys Met Gly Ile Ile Ile Lys Asp
 35 40 45
 Tyr Ala Phe Leu Ser Lys Ser Thr Lys Lys Asn Ser Glu Leu Asp Tyr
 50 55 60
 Asp Tyr Ala Ile Leu Leu Arg Lys Asp Glu Val Val Lys Ile Glu Lys
 65 70 75 80
 Thr Leu Glu Lys Thr Glu Arg Tyr Gly Ile Glu Gly Asn Trp Ile Leu
 85 90 95
 Val Asn Tyr Lys Gly Thr Lys Arg Tyr Ile Phe Ser Lys Asp Ile Asn
 100 105 110
 Ile Val Asn Asn Leu Ile Ile Asp His Ser Lys
 115 120

<210> 458
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 458
 Cys Asn Lys Asn Asn Lys Ile Pro Leu Ile Gln Lys Leu Asp Leu Pro
 1 5 10 15
 Lys Ser Ser Ile Leu Gly Phe Ser Asn Lys Met Gly Ile Ile Ile Lys
 20 25 30
 Asp Tyr Ala Phe Leu Ser Lys Ser Thr Lys Lys Asn Ser Glu Leu Asp
 35 40 45
 Tyr Asp Tyr Ala Ile Leu Leu Arg Lys Asp Glu Val Val Lys Ile Glu
 50 55 60
 Lys Thr Leu Glu Lys Thr Glu Arg Tyr Gly Ile Glu Gly Asn Trp Ile
 65 70 75 80
 Leu Val Asn Tyr Lys Gly Thr Lys Arg Tyr Ile Phe Ser Lys Asp Ile
 85 90 95
 Asn Ile Val Asn Asn Leu Ile Ile Asp His Ser Lys

<210> 459
 <211> 372
 <212> DNA
 <213> Homo sapiens

<400> 459
 atgaatacaa aaacattata tttaatatcc ttaattcttt tagcttgcaa taaaaataac 60
 aaaattcctc tcattcaaaa attagatttg cccaaaagca gcattcttgg cttagcaat 120
 aaaatgggca taataataaa agattatgct tttcttagta aaagcactaa gaaaaatagc 180
 gaattggatt atgattacgc aattctactc agaaaagacg aagtcgtaaa aattgaaaaa 240
 aactagaaa aaacagagcg ctatggaatt gaaggaaatt ggatcctagt caattacaag 300
 ggaactaaaa gatacatctt tagcaaagac atcaatatag tcaacaattt aataattgat 360
 cattctaaat ag 372

<210> 460
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 460
 tgcaataaaa ataacaaaat tcctctcatt caaaaattag atttgcccaa aagcagcatt 60
 cttggcttta gcaataaaaat gggcataata ataaaagatt atgcttttct tagtaaaagc 120
 actaagaaaa atagcgaatt ggattatgat tacgcaattc tactcagaaa agacgaagtc 180
 gtaaaaattg aaaaaacact agaaaaaaca gagcgctatg gaattgaagg aaattggatc 240
 ctagtcaatt acaagggaac taaaagatac atctttagca aagacatcaa tatagtcaac 300
 aatttaataa ttgatcattc taaatag 327

<210> 461
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 461
 Met Lys Ser Ile Tyr Ala Leu Leu Phe Leu Phe Ile Asn Leu Ser Leu
 1 5 10 15
 Leu Ala Asn Asn Ile Ser Lys Lys Asp Leu Glu Val Leu Leu Lys Ile
 20 25 30
 Ala Gln Ala Met Asn Lys Glu Cys Lys Asn Phe Ile Glu Lys Asn Pro
 35 40 45
 Ile Gln Phe Leu Lys Glu Ile Lys Pro Leu Val Asp Ala Glu Lys Asn
 50 55 60
 Asn Leu Leu Thr Leu Ile Asn Lys Lys Ile Pro Ile Pro Glu Asn Tyr
 65 70 75 80
 Lys Ile Pro Asp Leu Val Asn Ile Asp Asp Phe Glu Asp Leu Lys Asn
 85 90 95
 Leu Gly Ala Lys Thr Ile Lys Val Arg Lys Ile Leu Ile Glu Asp Leu
 100 105 110
 Ile Arg Leu Ile Lys Asp Ala Lys Lys Phe Gly Ile Glu Ile Lys Ile
 115 120 125
 Lys Ser Ala Tyr Arg Thr Gln Glu Tyr Gln Lys Phe Leu Phe Asp Tyr

130 135 140
 Asn Val Lys Thr Tyr Gly Arg Lys Val Ala Glu Thr Gln Ser Ala Ile
 145 150 155 160
 Pro Gly His Ser Gln His His Met Gly Thr Ala Ile Asp Phe Ile Asn
 165 170 175
 Ile Asp Asp Asn Leu Leu Asn Thr Lys Glu Gly Lys Trp Leu Tyr Glu
 180 185 190
 Asn Ser Leu Lys Tyr Gly Phe Ser Val Ser Tyr Pro Lys Gly Tyr Glu
 195 200 205
 Thr Asp Thr Gly Tyr Lys Ala Glu Pro Trp His Tyr Leu Tyr Ile Gly
 210 215 220
 Pro Lys Pro Cys Phe Ile Gln Lys Lys Tyr Phe Asn Asn Leu Gln His
 225 230 235 240
 Lys Leu Leu Glu Phe Trp Asn Gln Asn Lys Thr Asn Leu Ile Asn Leu
 245 250 255
 Ile Glu Lys Tyr Ala Asn
 260

<210> 462
 <211> 244
 <212> PRT
 <213> Homo sapiens

<400> 462
 Asn Asn Ile Ser Lys Lys Asp Leu Glu Val Leu Leu Lys Ile Ala Gln
 1 5 10 15
 Ala Met Asn Lys Glu Cys Lys Asn Phe Ile Glu Lys Asn Pro Ile Gln
 20 25 30
 Phe Leu Lys Glu Ile Lys Pro Leu Val Asp Ala Glu Lys Asn Asn Leu
 35 40 45
 Leu Thr Leu Ile Asn Lys Lys Ile Pro Ile Pro Glu Asn Tyr Lys Ile
 50 55 60
 Pro Asp Leu Val Asn Ile Asp Asp Phe Glu Asp Leu Lys Asn Leu Gly
 65 70 75 80
 Ala Lys Thr Ile Lys Val Arg Lys Ile Leu Ile Glu Asp Leu Ile Arg
 85 90 95
 Leu Ile Lys Asp Ala Lys Lys Phe Gly Ile Glu Ile Lys Ile Lys Ser
 100 105 110
 Ala Tyr Arg Thr Gln Glu Tyr Gln Lys Phe Leu Phe Asp Tyr Asn Val
 115 120 125
 Lys Thr Tyr Gly Arg Lys Val Ala Glu Thr Gln Ser Ala Ile Pro Gly
 130 135 140
 His Ser Gln His His Met Gly Thr Ala Ile Asp Phe Ile Asn Ile Asp

<210> 465
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 465

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Met Leu Tyr Leu Gly Asp Asn Lys Ala Met Arg Thr Lys Ile Ile Ile
 1           5           10           15

Met Thr Ile Ile Ile Leu Leu Ala Pro Ile Ser Gly Phe Ser Asn Ser
          20           25           30

Lys Glu Ser Ala Arg Gly Lys Phe Gly Ala Gly Ile Ile Leu Pro Leu
          35           40           45

Pro Ile Ala Leu Gln Ile Asn Ile Gly Asn Phe Asp Leu Asp Ile Gly
          50           55           60

Leu Tyr Ser Gly Val Asn Asn Leu Phe Ser Asp Trp Lys Thr Leu Phe
          65           70           75           80

Ile Ala Leu Asp Tyr Ile Phe Tyr Ile Tyr Thr Phe Pro Gly Ala Ala
          85           90           95

Asn Ile Leu Asp Phe Ser Val Gly Ala Gly Gly Tyr Gly Thr Ile Trp
          100          105          110

Phe Ser Arg Phe Gly Gly Ser Lys Ser Gly Ser Gly Pro Met Ser Ile
          115          120          125

Gly Ala Arg Leu Pro Leu Ala Leu Asn Ile Ala Val Phe Arg Lys Lys
          130          135          140

Phe Asp Ile Phe Leu Arg Ile Ala Pro Gly Leu Gly Met Asn Val Trp
          145          150          155          160

Ser Asn Gly Val Gly Phe Arg Trp Glu Val Phe Ala Gly Leu Gly Leu
          165          170          175

Arg Phe Trp Phe Thr
          180
  
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<210> 466
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 466

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Leu Ala Pro Ile Ser Gly Phe Ser Asn Ser Lys Glu Ser Ala Arg Gly
 1           5           10           15

Lys Phe Gly Ala Gly Ile Ile Leu Pro Leu Pro Ile Ala Leu Gln Ile
          20           25           30

Asn Ile Gly Asn Phe Asp Leu Asp Ile Gly Leu Tyr Ser Gly Val Asn
          35           40           45

Asn Leu Phe Ser Asp Trp Lys Thr Leu Phe Ile Ala Leu Asp Tyr Ile
          50           55           60
  
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Phe Tyr Ile Tyr Thr Phe Pro Gly Ala Ala Asn Ile Leu Asp Phe Ser
65 70 75 80

Val Gly Ala Gly Gly Tyr Gly Thr Ile Trp Phe Ser Arg Phe Gly Gly
85 90 95

Ser Lys Ser Gly Ser Gly Pro Met Ser Ile Gly Ala Arg Leu Pro Leu
100 105 110

Ala Leu Asn Ile Ala Val Phe Arg Lys Lys Phe Asp Ile Phe Leu Arg
115 120 125

Ile Ala Pro Gly Leu Gly Met Asn Val Trp Ser Asn Gly Val Gly Phe
130 135 140

Arg Trp Glu Val Phe Ala Gly Leu Gly Leu Arg Phe Trp Phe Thr
145 150 155

<210> 467

<211> 546

<212> DNA

<213> Homo sapiens

<400> 467

atgctatact taggagataa taaagcaatg agaacaaaaa taattattat gacaattatt 60
attttatttag cccaatctc aggatthttct aattcaaaaag aatctgcaag gggttaaattt 120
ggagcaggaa ttatacttcc attaccaatt gctctacaga ttaatatagg aaactttgat 180
cttgacattg gtctttacag cggagtaaat aatttgthttt cagactggaa aacattattt 240
atagcattag actatatttt ctacatatac acattcccgg gagctgctaa tattttggat 300
ttttcagttg gcgcaggggg atatggaaca atatggthttt caagatttgg aggcagtaag 360
tcaggctcag gaccaatgag cattggagca agattgcctt tggccttaaa tattgcagta 420
tttaggaaga aattcgacat atttttacga atagcaccgg gacttggaat gaatgtttgg 480
agtaatggcg ttggatttag atgggaagta ttcgcaggat tgggactaag attctggttt 540
acttaa 546

<210> 468

<211> 480

<212> DNA

<213> Homo sapiens

<400> 468

ttagcccaaa tctcaggatt ttctaattca aaagaatctg caaggggtaa atttgagca 60
ggaattatac ttccattacc aattgctcta cagattaata taggaaactt tgatcttgac 120
attggtcttt acagcggagt aaataatttg ttttcagact ggaaaacatt atttatagca 180
ttagactata ttttctacat atacacattc ccgggagctg ctaatatthtt ggatttttca 240
gttggcgcag ggggatattg aacaatatgg ttttcaagat ttggaggcag taagtcaggc 300
tcaggaccaa tgagcattgg agcaagattg cctttggcct taaatattgc agtatttagg 360
aagaaattcg acatattthtt acgaatagca ccgggacttg gaatgaatgt ttggagtaat 420
ggcgttggat ttagatggga agtattcgca ggattgggac taagattctg gtttacttaa 480

<210> 469

<211> 209

<212> PRT

<213> Homo sapiens

<400> 469

Met Asn Lys Thr Lys Asn Arg Ser Leu Thr Tyr Phe Ile Ile Leu Ser
1 5 10 15

Cys Ile Ser Leu Phe Gly Ala Asn Asn Asn Thr Ile Ser Tyr Ser Ser
 20 25 30
 Ile Glu Ile Pro Leu Glu Asp Leu Ser Glu Glu Phe Lys Ser Ser Gly
 35 40 45
 Asn Lys Ser Asp Gln Ile Asn Thr Ser Lys His Leu Asn Lys Asn Ile
 50 55 60
 Val Ser Tyr Glu Asp Pro Lys Lys Gly Lys Asp Leu Lys Leu Pro Glu
 65 70 75 80
 Asn Ile Arg Asp Lys Lys Leu Pro Gln Lys Arg Met Asp Glu Asn Asp
 85 90 95
 Leu Lys Ser Val Ile Glu Asn Tyr Glu Asn Lys Ile Lys Asn Ile Glu
 100 105 110
 Lys Leu Leu Lys Thr Lys Asn Gln Lys Thr Ser Glu Asn Glu Asn Lys
 115 120 125
 Lys Ile Glu Ser Ile Glu Lys Lys Ala Lys Lys Tyr Glu Ile Leu Thr
 130 135 140
 Asn Lys Leu Lys Asn Glu Ile Val Glu Ile Lys Lys Leu Leu Asn Lys
 145 150 155 160
 Lys Ile Lys Pro Lys Glu Asp Glu Asn Tyr Glu Lys Ile Asn Ile Glu
 165 170 175
 Asn Ile Glu Glu Glu Thr Asp Asp Asp Phe Glu Asp Asn Tyr Glu Tyr
 180 185 190
 Asn Asp Glu Ile Glu Glu Gln Met Arg Thr Ile Thr Leu Leu Met Lys
 195 200 205

Glu

<210> 470
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 470
 Cys Ile Ser Leu Phe Gly Ala Asn Asn Asn Thr Ile Ser Tyr Ser Ser
 1 5 10 15
 Ile Glu Ile Pro Leu Glu Asp Leu Ser Glu Glu Phe Lys Ser Ser Gly
 20 25 30
 Asn Lys Ser Asp Gln Ile Asn Thr Ser Lys His Leu Asn Lys Asn Ile
 35 40 45
 Val Ser Tyr Glu Asp Pro Lys Lys Gly Lys Asp Leu Lys Leu Pro Glu
 50 55 60
 Asn Ile Arg Asp Lys Lys Leu Pro Gln Lys Arg Met Asp Glu Asn Asp
 65 70 75 80

<211> 552
 <212> PRT
 <213> Homo sapiens

<400> 473
 Met Gln Ile Asp Gly Lys Ile Tyr Ser Ile Ile Ser Phe Pro Val Arg
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 Asp Ser Val Ser Thr Leu Gly Val Ile Gly Ile Leu Ile Cys Phe Asp
 20 25 30
 Glu Ser Leu Asp Ile Ile Glu Asn Gln Leu Tyr Ser Ser Leu Lys Phe
 35 40 45
 Gly Ser Lys Asn Tyr Asn Phe Phe Met Leu Asp Arg Asn Tyr Met Pro
 50 55 60
 Ile Phe Ser Asn Leu Asn Asn Leu Gln Ala Lys Ser Phe Ser Thr Ala
 65 70 75 80
 Tyr Ser Glu Asn Phe Leu Ser Lys Val Ile Ala Tyr Ala Lys Lys Asp
 85 90 95
 Ser Ser Ser Ser Gln Tyr Thr Phe Asn Tyr Glu Arg Asp Phe Tyr Ser
 100 105 110
 Leu Asn Phe Val Lys Thr Asp Asp Phe Leu Thr Gln Gly Leu Ile Leu
 115 120 125
 Asn Val Asn Ser Ile Pro Ile Met Phe Lys Ser Asn Trp Val Ile Phe
 130 135 140
 Val Ala Phe Leu Leu Leu Ser Phe Ala Ile Ile Phe Tyr Leu Cys Asn
 145 150 155 160
 Thr Phe Val Phe Ser Leu Ile Asn Asp Phe Asn Arg Ile Val Asp Tyr
 165 170 175
 Gln Lys Ser Lys Ser Asp Pro Phe Ser Leu Glu Ser Pro Leu Glu Val
 180 185 190
 Lys Tyr Ser Ser Ser Ile Ile Ser Tyr Ile Ser Ser Lys Leu Asp Asn
 195 200 205
 Leu Ser Ser Lys Ser Asn Glu Ser Phe Glu Lys Ile Lys Phe Tyr Ser
 210 215 220
 Glu Asp Leu Asn Glu Tyr Leu Glu Gln Ile Glu Thr Ala Ile Ser Asn
 225 230 235 240
 Thr Glu Ser Ile Asp Ser Ser Ile Leu Val Tyr Glu Gln Leu Arg Asp
 245 250 255
 Thr Phe Ser Arg Phe Glu Lys Ser Ile Val Asp Ile Leu Lys Gly Phe
 260 265 270
 Glu Ser Ile Ala Asp Pro Ile Asn Asp His Asn Lys Tyr Ile Ser Glu
 275 280 285
 Ile Ser Ser Asn Phe Glu Glu Ser Val Ser Phe Phe Tyr Ser Ile Asp

290	295	300
Lys Asn Leu Glu Ile Phe Asn Lys Val Ala Thr Ile Asn Ser Thr Asp 305 310 315 320		
Ile Glu Asn Ile Lys Ser Lys Val Phe Asp Leu Asn Ile Val Phe Glu 325 330 335		
Asn Val Asn Lys Asn Phe Ala Asp Leu Leu Ser Gln Thr Asn Ser Leu 340 345 350		
Gln Ser Val Asn Lys Leu Leu Val Ser Ile Ser Ala Gln Thr Asn Met 355 360 365		
Leu Ala Met Asn Ala Ala Ile Glu Ala Ala Lys Ala Gly Asp Ala Gly 370 375 380		
Lys Ser Phe Ala Val Val Ala Glu Glu Ile Arg Lys Leu Ala Ile Asn 385 390 395 400		
Ser Gly Lys Tyr Ser Lys Thr Ile Lys Asp Glu Leu Lys Thr Val Asp 405 410 415		
Ser Ile Ile Ala Val Ile Asn Ser Glu Ile Asp Thr Ile Tyr Lys Asn 420 425 430		
Phe Ile Asp Ile Gln Asp Asn Val Asp Asn Asn Phe Ser Arg His Glu 435 440 445		
Lys Val Asp Leu Thr Leu Ala Lys His Phe Lys Glu Ile Gly Glu Phe 450 455 460		
Lys Glu Arg Tyr Leu Ser His Asp Thr Lys Ile Arg Asp Ala Lys Asn 465 470 475 480		
Met Tyr Lys Glu Ile Phe Asn Asn His Tyr Phe Ile Ser Gly Lys Phe 485 490 495		
Asn Asn Phe Ser Gln Asp Leu Lys Glu Phe Lys Val Ser Lys Met Asn 500 505 510		
Leu Asp Ala Val Ser Ser Leu Gln Glu Tyr Ser Ser Leu Val Lys Ser 515 520 525		
Ser Lys Asp Lys Ile Leu Lys Thr Lys Glu Leu Ile Gln Lys Ile Asn 530 535 540		
Asp Glu Ile Lys Asp Ile Leu Phe 545 550		

<210> 474

<211> 523

<212> PRT

<213> Homo sapiens

<400> 474

Cys Phe Asp Glu Ser Leu Asp Ile Ile Glu Asn Gln Leu Tyr Ser Ser
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Leu Lys Phe Gly Ser Lys Asn Tyr Asn Phe Phe Met Leu Asp Arg Asn

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Tyr	Met	Pro	Ile	Phe	Ser	Asn	Leu	Asn	Asn	Leu	Gln	Ala	Lys	Ser	Phe
		35					40					45			
Ser	Thr	Ala	Tyr	Ser	Glu	Asn	Phe	Leu	Ser	Lys	Val	Ile	Ala	Tyr	Ala
	50					55					60				
Lys	Lys	Asp	Ser	Ser	Ser	Ser	Gln	Tyr	Thr	Phe	Asn	Tyr	Glu	Arg	Asp
	65					70					75				80
Phe	Tyr	Ser	Leu	Asn	Phe	Val	Lys	Thr	Asp	Asp	Phe	Leu	Thr	Gln	Gly
				85					90					95	
Leu	Ile	Leu	Asn	Val	Asn	Ser	Ile	Pro	Ile	Met	Phe	Lys	Ser	Asn	Trp
			100					105					110		
Val	Ile	Phe	Val	Ala	Phe	Leu	Leu	Leu	Ser	Phe	Ala	Ile	Ile	Phe	Tyr
		115					120					125			
Leu	Cys	Asn	Thr	Phe	Val	Phe	Ser	Leu	Ile	Asn	Asp	Phe	Asn	Arg	Ile
	130					135					140				
Val	Asp	Tyr	Gln	Lys	Ser	Lys	Ser	Asp	Pro	Phe	Ser	Leu	Glu	Ser	Pro
	145					150					155				160
Leu	Glu	Val	Lys	Tyr	Ser	Ser	Ser	Ile	Ile	Ser	Tyr	Ile	Ser	Ser	Lys
			165					170						175	
Leu	Asp	Asn	Leu	Ser	Ser	Lys	Ser	Asn	Glu	Ser	Phe	Glu	Lys	Ile	Lys
		180						185					190		
Phe	Tyr	Ser	Glu	Asp	Leu	Asn	Glu	Tyr	Leu	Glu	Gln	Ile	Glu	Thr	Ala
		195					200					205			
Ile	Ser	Asn	Thr	Glu	Ser	Ile	Asp	Ser	Ser	Ile	Leu	Val	Tyr	Glu	Gln
	210					215					220				
Leu	Arg	Asp	Thr	Phe	Ser	Arg	Phe	Glu	Lys	Ser	Ile	Val	Asp	Ile	Leu
	225					230					235				240
Lys	Gly	Phe	Glu	Ser	Ile	Ala	Asp	Pro	Ile	Asn	Asp	His	Asn	Lys	Tyr
			245					250						255	
Ile	Ser	Glu	Ile	Ser	Ser	Asn	Phe	Glu	Glu	Ser	Val	Ser	Phe	Phe	Tyr
		260						265					270		
Ser	Ile	Asp	Lys	Asn	Leu	Glu	Ile	Phe	Asn	Lys	Val	Ala	Thr	Ile	Asn
		275					280					285			
Ser	Thr	Asp	Ile	Glu	Asn	Ile	Lys	Ser	Lys	Val	Phe	Asp	Leu	Asn	Ile
	290					295					300				
Val	Phe	Glu	Asn	Val	Asn	Lys	Asn	Phe	Ala	Asp	Leu	Leu	Ser	Gln	Thr
	305					310					315			320	
Asn	Ser	Leu	Gln	Ser	Val	Asn	Lys	Leu	Leu	Val	Ser	Ile	Ser	Ala	Gln
			325					330						335	
Thr	Asn	Met	Leu	Ala	Met	Asn	Ala	Ala	Ile	Glu	Ala	Ala	Lys	Ala	Gly


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ggatgatgcag gtaaaagttt tgcagttggt gctgaggaga ttagaaagct tgctattaat 1200
tctggaaaat attctaaaac cattaaagat gaacttaaaa cggtcgacag cattattgca 1260
gtaattaatt cagagattga tacaatttat aaaaatttca tagacattca agataatgtg 1320
gacaacaatt tttcaagaca cgagaaagta gatcttactc ttgctaagca ttttaaagaa 1380
attggcgagt ttaaagaaag gtatttgtct cacgatacta agatcagaga tgctaagaat 1440
atgtataaag aaatatttaa taatcattat tttatttagt gcaagtttaa caactttagt 1500
caagatttaa aagagtttaa agtttctaag atgaatttag atgcggttaag ttctcttcaa 1560
gaatattcat ctttagtaaa gtcttctaag gataagatat taaagacaaa ggaattgatt 1620
caaaagatta atgatgagat taaagatat ctttttttag 1659

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<210> 476
 <211> 1572
 <212> DNA
 <213> Homo sapiens

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<400> 476
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agtaaaaatt ataatttttt tatgcttgac agaaattaca tgcccatttt ttcaaacttt 120
aataatcttc aggccaaatc tttttctaca gcttatagtg agaatttttt gagtaaagtt 180
atagcttatg ctaaaaaaga ttcttctagc tctcagtaca cttttaatta tgaaagagat 240
ttttattctt taaactttgt aaaaaccgat gattttttga ctcaggggct tatttttaaat 300
gtcaattcca ttcctattat gtttaaataca aattgggtta tatttggtgc atttttatta 360
ttgtcttttg caattatttt ttatttatgc aatacttttg ttttttcatt aattaatgat 420
tttaacagaa ttgttgacta tcaaaaatca aaaagcgatc cttttagtct tgaatctccc 480
ttagagggtta agtattcttc atctattatt tcttatatta gttcaaagct agataatctg 540
tcttctaaga gtaatgaatc ttttgagaag ataaaatttt attctgaaga tttgaatgaa 600
tatttggaaac aaatagaaac tgctatatca aatactgaga gtatagattc tagcatttta 660
gtttacgaac aactaagaga tactttttct agatttgaaa aatcaattgt tgatatttta 720
aaaggctttg aatctattgc tgatccgatt aatgatcaca ataaatatat atcagaaatc 780
tcttcaaatt ttgaagagag tgttagtttt ttctatagta tagataaaaa ttagaaaatt 840
tttaataagg ttgctactat aaattctact gatattgaaa atattaaaag taagggtttt 900
gatttaaata ttgtttttga aaatgtgaat aaaaattttg cagatctttt gtctcaaaca 960
aatagtttgc aaagtgtaaa taaactttta gtttcaattt cagctcagac caatattgctt 1020
gctatgaatg cagcaattga agcagcaaaa gcagggtgat caggtaaaaag ttttgcagtt 1080
gttgctgagg agattagaaa gcttgctatt aattctggaa aatattctaa aaccattaaa 1140
gatgaactta aaacggtcga cagcattatt gcagtaatta attcagagat tgatacaatt 1200
tataaaaatt tcatagacat tcaagataat gtggacaaca atttttcaag acacgagaaa 1260
gtagatctta ctcttgctaa gcatttttaa gaaattggcg agtttaaaga aagggtatttg 1320
tctcacgata ctaagatcag agatgctaag aatatgtata aagaaatatt taataatcat 1380
tattttatta gtggcaagtt taacaacttt agtcaagatt taaaagagtt taaagtttct 1440
aagatgaatt tagatgcggt aagttctctt caagaatatt catcttttagt aaagtcttct 1500
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<210> 477
 <211> 166
 <212> PRT
 <213> Homo sapiens

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<400> 477
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Gly Asp Gly Ile Ala Ile Leu Pro Thr Ser Asn Glu Leu Leu Ala Pro
      20              25              30

Cys Asp Gly Lys Ile Gly Lys Ile Phe Lys Thr Asn His Ala Phe Ser
      35              40              45

Leu Glu Thr Lys Glu Gly Val Glu Ile Phe Val His Phe Gly Ile Asn

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50 55 60
 Thr Leu Asn Leu Asn Gly Lys Gly Phe Thr Arg Val Ala Glu Glu Gly
 65 70 75 80
 Ile Asn Val Lys Gln Gly Glu Val Ile Ile Arg Leu Asp Leu Glu Tyr
 85 90 95
 Leu Lys Glu His Ser Glu Ser Val Ile Thr Pro Val Val Ile Ala Asn
 100 105 110
 Ser Asp Glu Val Ser Ser Ile Glu Tyr Ser Phe Gly Arg Leu Glu Asn
 115 120 125
 Asp Ser Glu Tyr Ile Leu Ser Ser Ser Thr Val Leu Thr Glu Glu Ile
 130 135 140
 Arg His Lys Ile Ser Gln Thr Lys Pro Val Ile Ala Gly Lys Asp Leu
 145 150 155 160
 Val Leu Arg Val Lys Lys
 165

<210> 478
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 478
 Cys Asp Gly Lys Ile Gly Lys Ile Phe Lys Thr Asn His Ala Phe Ser
 1 5 10 15
 Leu Glu Thr Lys Glu Gly Val Glu Ile Phe Val His Phe Gly Ile Asn
 20 25 30
 Thr Leu Asn Leu Asn Gly Lys Gly Phe Thr Arg Val Ala Glu Glu Gly
 35 40 45
 Ile Asn Val Lys Gln Gly Glu Val Ile Ile Arg Leu Asp Leu Glu Tyr
 50 55 60
 Leu Lys Glu His Ser Glu Ser Val Ile Thr Pro Val Val Ile Ala Asn
 65 70 75 80
 Ser Asp Glu Val Ser Ser Ile Glu Tyr Ser Phe Gly Arg Leu Glu Asn
 85 90 95
 Asp Ser Glu Tyr Ile Leu Ser Ser Ser Thr Val Leu Thr Glu Glu Ile
 100 105 110
 Arg His Lys Ile Ser Gln Thr Lys Pro Val Ile Ala Gly Lys Asp Leu
 115 120 125
 Val Leu Arg Val Lys Lys
 130

<210> 479
 <211> 501
 <212> DNA
 <213> Homo sapiens

<400> 479
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tttaaaacca atcatgcctt tagccttgaa actaaagagg gcgttgaaat ttttgtccat 180
tttgggaatta atactcttaa tttaaatggg aaggggttta caagagttgc tgaagagggc 240
attaatgtta aacaagggtga agttattatt aggcttgatc ttgaatattt aaaagagcat 300
tcagaatccg ttattactcc ggttggttatt gcaaattctg atgaagtttc aagtatagaa 360
tattcttttg gaaggcttga aaatgattct gaatatattt tatcatcttc aactgtcttg 420
acagaagaaa ttaggcataa aatatctcaa acaaagcctg ttatagcggg caaagatttg 480
gtgttgcgag ttaaaaagta a 501

<210> 480
<211> 405
<212> DNA
<213> Homo sapiens

<400> 480
tgtgatggga aaataggtaa aattttttaa accaatcatg ccttttagcct tgaaactaaa 60
gagggcggtg aaatttttgt ccatttttga attaatactc ttaattttaa tggtaagggg 120
tttacaagag ttgctgaaga gggcattaat gttaaacaag gtgaagttat tattaggctt 180
gatcttgaat atttaaaaga gcattcagaa tccggttatta ctccggttgt tattgcaaat 240
tctgatgaag tttcaagtat agaataattct tttggaaggc ttgaaaatga ttctgaatat 300
attttatcat cttcaactgt cttgacagaa gaaattaggc ataaaatatc tcaaacaaag 360
cctgttatag cgggcaaaga tttggtgttg cgagttaaaa agtaa 405

<210> 481
<211> 718
<212> PRT
<213> Homo sapiens

<400> 481
Met Asn Tyr Gln Arg Ile Lys Asn Tyr Cys Lys Phe Thr Ser Val Phe
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Leu Phe Phe Leu Phe Ser Cys Val Ser Asn Glu Leu Lys Leu Asp Gln
20 25 30
Ser Leu Val Lys Gly Lys Leu Val Asn Gly Leu Arg Tyr Tyr Ile Tyr
35 40 45
Lys Asn Gln Thr Pro Lys Asn Ala Val Asn Met Gly Ile Val Phe Asn
50 55 60
Val Gly Ser Leu Asn Glu Glu Asp Asn Glu Arg Gly Ile Ala His Tyr
65 70 75 80
Leu Glu His Met Ala Phe Asn Gly Thr Lys Asp Tyr Pro Gly Asn Ser
85 90 95
Ile Val Asp Val Leu Lys Lys Phe Gly Met Gln Phe Gly Ala Asp Ile
100 105 110
Asn Ala Ala Thr Ser Phe Asp Phe Thr Tyr Tyr Arg Leu Asp Leu Ser
115 120 125
Asp Gly Asn Asn Lys Asp Glu Ile Asp Glu Ser Ile Asn Ile Leu Arg
130 135 140
Asn Trp Ala Ser Gln Ile Ser Phe Met Lys Glu Glu Ile Asp Leu Glu

145											150											155											160
Arg	Asn	Ile	Ile	Ile	Glu	Glu	Lys	Lys	Leu	Gly	Glu	Thr	Tyr	Pro	Gly																		
				165											170											175							
Arg	Ile	Tyr	Glu	Lys	Met	Asp	Lys	Phe	Leu	Thr	Ser	Gly	Ser	Leu	Tyr																		
				180											185											190							
Glu	Phe	Arg	Ser	Pro	Ile	Gly	Leu	Glu	Glu	Gln	Ile	Leu	Ser	Phe	Gln																		
				195											200											205							
Pro	Glu	Asp	Phe	Lys	Lys	Phe	Tyr	Arg	Lys	Trp	Tyr	Arg	Pro	Glu	Leu																		
				210											215											220							
Ala	Ser	Val	Ile	Val	Val	Gly	Asp	Ile	Asp	Pro	Ile	Glu	Ile	Glu	Glu																		
225					230											235											240						
Lys	Ile	Lys	Lys	Gln	Phe	Val	Ser	Trp	Lys	Asn	Pro	Thr	Asp	Lys	Ile																		
				245											250											255							
Lys	Glu	Val	Lys	Val	Ser	Leu	Asp	Val	Glu	Leu	Lys	Asp	Lys	Phe	Leu																		
				260											265											270							
Leu	Leu	Glu	Asp	Leu	Glu	Val	Gly	Glu	Pro	Ser	Leu	Met	Phe	Phe	Lys																		
				275											280											285							
Lys	Glu	Ile	Ile	Asn	Phe	Val	Lys	Thr	Lys	Asp	Asp	Leu	Leu	Asn	Ala																		
				290											295											300							
Ile	Lys	Lys	Ser	Leu	Leu	Ala	Ala	Leu	Phe	Glu	Asn	Arg	Phe	Ser	Glu																		
305					310											315											320						
Leu	Lys	Thr	Ala	Gly	Val	Lys	Gln	Phe	Lys	Asn	Val	Ser	Asn	Lys	Asp																		
				325											330											335							
Phe	Phe	Ser	Phe	Lys	Ser	Asp	Asn	Asn	Thr	Ile	Val	Ala	Lys	Ser	Ile																		
				340											345											350							
Ser	Leu	Asn	Phe	Asn	Pro	Asp	His	Leu	Asn	Glu	Gly	Ile	Gln	Asp	Phe																		
				355											360											365							
Phe	Tyr	Glu	Leu	Glu	Arg	Ile	Arg	Lys	Phe	Gly	Phe	Thr	Gln	Gly	Glu																		
				370											375											380							
Leu	Glu	Lys	Val	Arg	Ser	Gln	Phe	Tyr	Lys	Ser	Leu	Glu	Leu	Arg	Lys																		
385					390											395											400						
Lys	Asn	Ile	Asn	Lys	Thr	Asn	Ser	Trp	Ala	Ile	Phe	Gln	Asp	Leu	Ile																		
				405											410											415							
Glu	Ile	Ala	Ile	Asn	Gly	Ser	Asn	Lys	Phe	Asp	Met	Asn	Glu	Tyr	Cys																		
				420											425											430							
Asp	Leu	Ser	Phe	Gln	Tyr	Leu	Glu	Lys	Ile	Asp	Leu	Lys	Thr	Ile	Asn																		
				435											440											445							
Asn	Leu	Val	Gly	Arg	Glu	Phe	Asp	Val	Lys	Asn	Cys	Ala	Ile	Phe	Tyr																		
				450											455											460							
Ser	Tyr	His	Gly	Arg	Ala	His	Pro	Val	Leu	Thr	Leu	Glu	Asp	Ile	Asp																		

366

465 470 475 480
 Asn Leu Gln Lys Ile Ala Leu Lys Arg Glu Leu Lys Pro Tyr Glu Asn
 485 490 495
 Ser Leu Ile Glu Gly Lys Phe Phe Lys Lys Ser Leu Asp Asp Lys Asp
 500 505 510
 Ile Ile Arg Glu Asn Glu Phe Glu Asn Glu Ile Ser Ser Phe Val Leu
 515 520 525
 Glu Asn Gly Val Glu Val Tyr Phe Lys Tyr Asn Asp Gln Lys Lys Gly
 530 535 540
 Val Ile Asp Phe Ser Ala Thr Ser Trp Gly Gly Leu Ile Asn Glu Asp
 545 550 555 560
 Leu Lys Leu Ile Pro Val Leu Ser Phe Ala Pro Gly Val Val Ser Gly
 565 570 575
 Ser Gly Tyr Gly Asp Tyr Ser Ala Leu Gln Ile Glu Lys Tyr Leu Ser
 580 585 590
 Asp Lys Ala Val Ser Leu Arg Val Gly Val Gly Ala Gln Glu Ser Tyr
 595 600 605
 Ile Ser Gly Ser Ser Asp Lys Lys Asp Leu Glu Thr Leu Phe Gln Leu
 610 615 620
 Ile Tyr Phe Thr Phe Lys Glu Pro Lys Ile Asp Asp Val Ser Leu Gln
 625 630 635 640
 Asn Ala Ile Asn Asn Ile Lys Ala Leu Ile Lys Ser Asn Glu Asn Ser
 645 650 655
 Ser Asp Tyr His Phe His Lys Ala Ile Ser Lys Phe Leu Asn Asn Asn
 660 665 670
 Asp Pro Arg Phe Glu Asp Thr Lys Asp Ser Asp Leu Gln Tyr Phe Thr
 675 680 685
 Lys Glu Asn Ile Leu Ser Phe Tyr Lys Lys Arg Phe Thr Tyr Ala Asn
 690 695 700
 Asn Phe Lys Phe Val Leu Leu Glu Thr Gln Ile Phe Arg Gln
 705 710 715

<210> 482

<211> 696

<212> PRT

<213> Homo sapiens

<400> 482

Cys Val Ser Asn Glu Leu Lys Leu Asp Gln Ser Leu Val Lys Gly Lys
 1 5 10 15

Leu Val Asn Gly Leu Arg Tyr Tyr Ile Tyr Lys Asn Gln Thr Pro Lys
 20 25 30

Asn Ala Val Asn Met Gly Ile Val Phe Asn Val Gly Ser Leu Asn Glu

35					40					45						
Glu	Asp	Asn	Glu	Arg	Gly	Ile	Ala	His	Tyr	Leu	Glu	His	Met	Ala	Phe	
50					55					60						
Asn	Gly	Thr	Lys	Asp	Tyr	Pro	Gly	Asn	Ser	Ile	Val	Asp	Val	Leu	Lys	
65					70					75					80	
Lys	Phe	Gly	Met	Gln	Phe	Gly	Ala	Asp	Ile	Asn	Ala	Ala	Thr	Ser	Phe	
85					90					95						
Asp	Phe	Thr	Tyr	Tyr	Arg	Leu	Asp	Leu	Ser	Asp	Gly	Asn	Asn	Lys	Asp	
100					105					110						
Glu	Ile	Asp	Glu	Ser	Ile	Asn	Ile	Leu	Arg	Asn	Trp	Ala	Ser	Gln	Ile	
115					120					125						
Ser	Phe	Met	Lys	Glu	Glu	Ile	Asp	Leu	Glu	Arg	Asn	Ile	Ile	Ile	Glu	
130					135					140						
Glu	Lys	Lys	Leu	Gly	Glu	Thr	Tyr	Pro	Gly	Arg	Ile	Tyr	Glu	Lys	Met	
145					150					155					160	
Asp	Lys	Phe	Leu	Thr	Ser	Gly	Ser	Leu	Tyr	Glu	Phe	Arg	Ser	Pro	Ile	
165					170					175						
Gly	Leu	Glu	Glu	Gln	Ile	Leu	Ser	Phe	Gln	Pro	Glu	Asp	Phe	Lys	Lys	
180					185					190						
Phe	Tyr	Arg	Lys	Trp	Tyr	Arg	Pro	Glu	Leu	Ala	Ser	Val	Ile	Val	Val	
195					200					205						
Gly	Asp	Ile	Asp	Pro	Ile	Glu	Ile	Glu	Glu	Lys	Ile	Lys	Lys	Gln	Phe	
210					215					220						
Val	Ser	Trp	Lys	Asn	Pro	Thr	Asp	Lys	Ile	Lys	Glu	Val	Lys	Val	Ser	
225					230					235					240	
Leu	Asp	Val	Glu	Leu	Lys	Asp	Lys	Phe	Leu	Leu	Leu	Glu	Asp	Leu	Glu	
245					250					255						
Val	Gly	Glu	Pro	Ser	Leu	Met	Phe	Phe	Lys	Lys	Glu	Ile	Ile	Asn	Phe	
260					265					270						
Val	Lys	Thr	Lys	Asp	Asp	Leu	Leu	Asn	Ala	Ile	Lys	Lys	Ser	Leu	Leu	
275					280					285						
Ala	Ala	Leu	Phe	Glu	Asn	Arg	Phe	Ser	Glu	Leu	Lys	Thr	Ala	Gly	Val	
290					295					300						
Lys	Gln	Phe	Lys	Asn	Val	Ser	Asn	Lys	Asp	Phe	Phe	Ser	Phe	Lys	Ser	
305					310					315					320	
Asp	Asn	Asn	Thr	Ile	Val	Ala	Lys	Ser	Ile	Ser	Leu	Asn	Phe	Asn	Pro	
325					330					335						
Asp	His	Leu	Asn	Glu	Gly	Ile	Gln	Asp	Phe	Phe	Tyr	Glu	Leu	Glu	Arg	
340					345					350						
Ile	Arg	Lys	Phe	Gly	Phe	Thr	Gln	Gly	Glu	Leu	Glu	Lys	Val	Arg	Ser	

355		360		365
Gln Phe Tyr Lys Ser Leu Glu Leu Arg Lys Lys Asn Ile Asn Lys Thr				
370		375		380
Asn Ser Trp Ala Ile Phe Gln Asp Leu Ile Glu Ile Ala Ile Asn Gly				
385		390		395
				400
Ser Asn Lys Phe Asp Met Asn Glu Tyr Cys Asp Leu Ser Phe Gln Tyr				
	405		410	
				415
Leu Glu Lys Ile Asp Leu Lys Thr Ile Asn Asn Leu Val Gly Arg Glu				
	420		425	
				430
Phe Asp Val Lys Asn Cys Ala Ile Phe Tyr Ser Tyr His Gly Arg Ala				
	435		440	
				445
His Pro Val Leu Thr Leu Glu Asp Ile Asp Asn Leu Gln Lys Ile Ala				
	450		455	
				460
Leu Lys Arg Glu Leu Lys Pro Tyr Glu Asn Ser Leu Ile Glu Gly Lys				
	465		470	
				475
				480
Phe Phe Lys Lys Ser Leu Asp Asp Lys Asp Ile Ile Arg Glu Asn Glu				
		485		
			490	
				495
Phe Glu Asn Glu Ile Ser Ser Phe Val Leu Glu Asn Gly Val Glu Val				
	500		505	
				510
Tyr Phe Lys Tyr Asn Asp Gln Lys Lys Gly Val Ile Asp Phe Ser Ala				
	515		520	
				525
Thr Ser Trp Gly Gly Leu Ile Asn Glu Asp Leu Lys Leu Ile Pro Val				
	530		535	
				540
Leu Ser Phe Ala Pro Gly Val Val Ser Gly Ser Gly Tyr Gly Asp Tyr				
	545		550	
				555
				560
Ser Ala Leu Gln Ile Glu Lys Tyr Leu Ser Asp Lys Ala Val Ser Leu				
		565		
			570	
				575
Arg Val Gly Val Gly Ala Gln Glu Ser Tyr Ile Ser Gly Ser Ser Asp				
	580		585	
				590
Lys Lys Asp Leu Glu Thr Leu Phe Gln Leu Ile Tyr Phe Thr Phe Lys				
	595		600	
				605
Glu Pro Lys Ile Asp Asp Val Ser Leu Gln Asn Ala Ile Asn Asn Ile				
	610		615	
				620
Lys Ala Leu Ile Lys Ser Asn Glu Asn Ser Ser Asp Tyr His Phe His				
	625		630	
				635
				640
Lys Ala Ile Ser Lys Phe Leu Asn Asn Asn Asp Pro Arg Phe Glu Asp				
		645		
			650	
				655
Thr Lys Asp Ser Asp Leu Gln Tyr Phe Thr Lys Glu Asn Ile Leu Ser				
	660		665	
				670
Phe Tyr Lys Lys Arg Phe Thr Tyr Ala Asn Asn Phe Lys Phe Val Leu				

Leu Glu Thr Gln Ile Phe Arg Gln
690 695

<210> 483
<211> 2157
<212> DNA
<213> Homo sapiens

<400> 483
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aatgggctaa ggtattatat ttataaaaaat caaaccccaa agaatgccgt taatatggga 180
attgttttta atgtgggctc acttaatgaa gaagataatg agaggggaat agcgcattat 240
cttgaacata tggcttttaa tggtaaaaaa gattatccag ggaattctat agttgatgtt 300
cttaaaaaat ttggaatgca atttggtgct gacattaatg ctgctactag ttttgatttc 360
acttattata gacttgattt gtcagatggt aataataaag atgaaattga tgaatctata 420
aatattttga gaaactgggc ttctcaaact agtttcatga aagaagaaat agatctagag 480
cgaaatatta ttattgagga aaaaaagctt ggtgagactt atcctggaag aatttatgag 540
aaaatggata agtttttgac aagcgggaagt ctttatgaat ttagaagtcc tattggactt 600
gaagagcaaa ttttatcttt tcagccagaa gattttaaaa aatttttatag aaagtgggtat 660
aggccagAAC ttgcaagtgt tattgtggta ggagatattg atcctataga aattgaagag 720
aagataaaga agcaatttgt ttcttggaaa aatccaaccg ataaaaattaa agaagtaaaa 780
gtaagtttag acgtagagct taaggataaa tttttacttt tagaagattt ggaagttgga 840
gagcctagtt taatgttctt taaaaaggaa attattaact ttgtaaagac caaagatgac 900
cttttaaatg ctattaaaaa gtctttatta gccgctcttt ttgaaaatag attttctgaa 960
ttaaagactg ctggggtaaa gcaattttaa aatgtttcaa ataaagattt tttctcattt 1020
aatcagata acaataccat tgttgcaaaa tcgatttctt taaactttta tccagatcat 1080
ttgaacgaag gaatacaaga ctttttttat gagcttgaga ggataagaaa atttggattt 1140
acccaaggtg agcttgaaaa agttagatct caattttaca aatctttaga attaaggaaa 1200
aagaatataa ataaaacaaa ttcatgggct atttttcagg atttaataga aattgctatt 1260
aatggttcta ataaatttga tatgaatgaa tattgcgac tttcttttca atatttgga 1320
aagattgatt taaaaacaat aaacaatctt gtaggaagag agtttgatgt aaaaaattgt 1380
gcaatttttt attcttacca tgggaagagca catcctgttt taactcttga agatattgac 1440
agattttcaa agatagcttt aaaaagagag ttaaagcctt atgagaattc tttaattgaa 1500
ggtaaaattt ttaagaagtc ttttagatgat aaagatatta ttagagaaaa tgagtttgaa 1560
aatgaaattt cgtcatttgt tcttgaaaat ggggttgaag tttattttta atataatgat 1620
caaaaaaaag gtgtaattga ttttagtgca acttcttggg gaggtttaat taatgaagat 1680
ttaaaactta ttctgtttt atcttttgct cccggagtag tatctggttc gggttatggt 1740
gattattctg cattacagat tgaaaaatat ttatcagata aagctgtttc ttttaagagt 1800
gggggttgag ctcaagaatc atatatattt ggaagttcag ataaaaaaga tcttgaaact 1860
ctttttcagc ttatatattt tacttttaag gaacccaaaa ttgatgatgt ttctttgcaa 1920
aatgctatta ataataaaa agcattaata aagagcaatg aaaatagttc tgattatcat 1980
tttcataaag ccattagtaa atttttaaac aataatgac ctagatttga agatacaaaa 2040
gatagtgatt tgcaatattt tacaaaagaa aatattttgt ctttttataa gaaaagggtt 2100
acttatgcaa ataattttta gtttgccttg ctggagactc agatattcag acaataa 2157

<210> 484
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 484
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ctaaggtatt atatttataa aaatcaaacc ccaaagaatg ccgttaatat gggaattggt 120
tttaatgtgg gtcacttaa tgaagaagat aatgagaggg gaatagcgca ttatcttgaa 180
catatggctt ttaatggtac aaaagattat ccagggaatt ctatagttga tgttctttaa 240
aaatttgtaa tgcaatttgg tgctgacatt aatgctgcta ctagtgttga tttcacttat 300
tatagacttg atttgtcaga tggtaataat aaagatgaaa ttgatgaatc tataaatatt 360

ttgagaaaact gggcttctca aatcagtttc atgaaagaag aaatagatct agagcgaaat 420
 attattattg aggaaaaaaa gcttggtgag acttatctcg gaagaattta tgagaaaatg 480
 gataagtttt tgacaagcgg aagtccttat gaatttagaa gtcctattgg acttgaagag 540
 caaattttat cttttcagcc agaagatttt aaaaaatttt atagaaagtg gtataggcca 600
 gaacttgcaa gtgttattgt ggtaggagat attgatccta tagaaattga agagaagata 660
 aagaagcaat ttgtttcttg gaaaaatcca accgataaaa ttaaagaagt aaaagtaagt 720
 ttagacgtag agcttaagga taaattttta cttttagaag atttggaagt tggagagcct 780
 agtttaatgt tctttaaaaa ggaaattatt aactttgtaa agaccaaaga tgacctttta 840
 aatgctatta aaaagtcttt attagccgct ctttttgaaa atagattttc tgaattaaag 900
 actgctgggg taaagcaatt taaaaatggt tcaaataaag attttttctc atttaaataca 960
 gataacaata ccattgttgc aaaatcgatt tctttaaact ttaatccaga tcatttgaac 1020
 gaaggaatac aagacttttt ttatgagctt gagaggataa gaaaatttgg atttacccea 1080
 ggtgagcttg aaaaagttag atctcaattt tacaatctt tagaattaag gaaaaagaat 1140
 ataaataaaa caaattcatg ggctattttt caggatttaa tagaaattgc tattaatggt 1200
 tctaataaat ttgatatgaa tgaatattgc gatctttctt ttcaatatatt ggaaaagatt 1260
 gatttaaaaa caataaacia tcttgtagga agagagtttg atgtaaaaaa ttgtgcaatt 1320
 ttttattctt accatggaag agcacatcct gttttaactc ttgaagatat tgacaatctt 1380
 caaaagatag ctttaaaaaag agagttaaag ccttatgaga attctttaat tgaaggtaaa 1440
 ttttttaaga agtcttttaga tgataaagat attattagag aaaatgagtt tgaaaatgaa 1500
 atttcgtcat ttgttcttga aaatgggggtt gaagtttatt ttaaatataa tgatcaaaaa 1560
 aaaggtgtaa ttgatttttag tgcaacttct tggggagggtt taattaatga agatttaaaa 1620
 cttattctctg ttttatcttt tgctcccgga gtagtatctg gttcgggtta tgggtgattat 1680
 tctgcattac agattgaaaa atatttatca gataaagctg tttctttaag agttgggggtt 1740
 ggagctcaag aatcatatat ttctggaagt tcagataaaa aagatcttga aactcttttt 1800
 cagcttatat attttacttt taaggaacccc aaaattgatg atgtttcttt gcaaaatgct 1860
 attaataata taaaagcatt aataaagagc aatgaaaata gttctgatta tcattttcat 1920
 aaagccatta gttaaatttt aaacaataat gatcctagat ttgaagatac aaaagatagt 1980
 gatttgcaat attttacaaa agaaaatatt ttgtcttttt ataagaaaag gtttacttat 2040
 gcaataaatt ttaagtttgt cttgctggag actcagatat tcagacaata a 2091

<210> 485

<211> 284

<212> PRT

<213> Homo sapiens

<400> 485

Met Asp Trp Asp Phe Glu Lys Ile Ile Phe Leu Leu Asn Glu Ser Thr
 1 5 10 15

Arg Leu Ala Leu Ser Gly Cys Ala Lys Leu Ile Leu Asp Phe Lys Ser
 20 25 30

Asp Gly Ser Ile Val Thr Gln Val Asp Lys Gln Ile Glu Gln Phe Leu
 35 40 45

Phe Lys Glu Ile Lys Lys Pro Gly Asn Phe Val Leu Gly Glu Glu Thr
 50 55 60

Ile Ser Thr Tyr Lys Glu Tyr Ile Lys Asp Ala Leu Ile Ser Glu
 65 70 75 80

Ser Thr Phe Ile Ile Asp Pro Ile Asp Gly Thr Ser Ser Phe Ala Ala
 85 90 95

Gly Leu Pro Ser Tyr Gly Ile Ser Leu Ala Tyr Ala Ser Gly Gly Lys
 100 105 110

Ile Ile Glu Gly Ala Ile Ser Leu Pro Leu Ser Gly Glu Phe Phe Ile
 115 120 125

Thr Ser Lys Asp Asn Val Phe Tyr Ala Lys Lys Asn Ile Gly Ser Tyr
 130 135 140

Pro Leu Lys Lys Asp Phe Asn Lys Phe Ile Phe Asp Asn Ser Lys Cys
 145 150 155 160

Tyr Asn Ile His Ser Leu Leu Ala Val Ser Arg Ser Ile Ile Arg Leu
 165 170 175

Phe Asn Leu Asp Ile Ser Ser His Ile His Ile Asn Gly Ser Cys Val
 180 185 190

Tyr Ser Phe Ala Lys Leu Phe Thr Gly Ser Tyr Lys Ala Tyr Phe Ser
 195 200 205

Phe Val Gly Leu Trp Asp Ile Ala Ala Cys Leu Ala Ile Gly Asn Lys
 210 215 220

Leu Gly Met Val Gly Glu Phe Tyr Cys Gly Asn Lys Met Thr Leu Asp
 225 230 235 240

Ile Leu Asp Ser Met Tyr Ile Leu Glu Pro Asn Asn His Lys Arg Trp
 245 250 255

Ser Leu Lys Asp Phe Phe Ile Tyr Ser Asp Asn Lys Ser Thr Ile Asp
 260 265 270

Ile Ile Arg Lys Asp Ala Asn Lys Lys Ile Asn Lys
 275 280

<210> 486

<211> 262

<212> PRT

<213> Homo sapiens

<400> 486

Cys Ala Lys Leu Ile Leu Asp Phe Lys Ser Asp Gly Ser Ile Val Thr
 1 5 10 15

Gln Val Asp Lys Gln Ile Glu Gln Phe Leu Phe Lys Glu Ile Lys Lys
 20 25 30

Pro Gly Asn Phe Val Leu Gly Glu Glu Thr Ile Ser Thr Tyr Lys Glu
 35 40 45

Glu Tyr Ile Lys Asp Ala Leu Ile Ser Glu Ser Thr Phe Ile Ile Asp
 50 55 60

Pro Ile Asp Gly Thr Ser Phe Ala Ala Gly Leu Pro Ser Tyr Gly
 65 70 75 80

Ile Ser Leu Ala Tyr Ala Ser Gly Gly Lys Ile Ile Glu Gly Ala Ile
 85 90 95

Ser Leu Pro Leu Ser Gly Glu Phe Phe Ile Thr Ser Lys Asp Asn Val
 100 105 110

Phe Tyr Ala Lys Lys Asn Ile Gly Ser Tyr Pro Leu Lys Lys Asp Phe
 115 120 125

Asn Lys Phe Ile Phe Asp Asn Ser Lys Cys Tyr Asn Ile His Ser Leu
 130 135 140
 Leu Ala Val Ser Arg Ser Ile Ile Arg Leu Phe Asn Leu Asp Ile Ser
 145 150 155 160
 Ser His Ile His Ile Asn Gly Ser Cys Val Tyr Ser Phe Ala Lys Leu
 165 170 175
 Phe Thr Gly Ser Tyr Lys Ala Tyr Phe Ser Phe Val Gly Leu Trp Asp
 180 185 190
 Ile Ala Ala Cys Leu Ala Ile Gly Asn Lys Leu Gly Met Val Gly Glu
 195 200 205
 Phe Tyr Cys Gly Asn Lys Met Thr Leu Asp Ile Leu Asp Ser Met Tyr
 210 215 220
 Ile Leu Glu Pro Asn Asn His Lys Arg Trp Ser Leu Lys Asp Phe Phe
 225 230 235 240
 Ile Tyr Ser Asp Asn Lys Ser Thr Ile Asp Ile Ile Arg Lys Asp Ala
 245 250 255
 Asn Lys Lys Ile Asn Lys
 260

<210> 487
 <211> 855
 <212> DNA
 <213> Homo sapiens

<400> 487
 atggattggg attttgaaaa aattatatatt ttattaaatg aatcaactag gcttgcatta 60
 agtggttgtg cttaaattaat tttagatttt aaatctgatg ggtctattgt aactcagggt 120
 gataagcaaa ttgagcaatt cttattcaaa gagatcaaaa agcctggaaa ttttggttctt 180
 ggagaagaga caatatctac ttataaagaa gagtatatca aagatgcttt aatatcagag 240
 agtactttta ttattgatcc tattgatgga acttcttctt ttgcagcagg ccttccttca 300
 tatggaatat cgctagcgta tgctagtggc ggcaaaatta ttgaaggagc catttctctt 360
 cctttaagcg gagagttttt tattacttct aaagataatg tattttatgc taaaaaaaaac 420
 attggtagct atccttttaa aaaggatttt aataaattta tttttgataa ttctaaatgt 480
 tacaatatcc atagtttact tgcagtttca aggtctatta taaggttatt taatcttgat 540
 atttcttctc atattcatat taatggttct tgtgtatatt cttttgctaa actttttaca 600
 ggttcttata aggcctactt ttcttttgta ggactttggg atattgcagc gtgttttagct 660
 attggtaata aattgggcat gggtggcgaa ttttattgtg gtaataaaat gacattagat 720
 atcttagatt caatgtatat tttagagcct aataatcata aaagatgggc cttgaaagat 780
 ttttttattt attctgataa taaatcaaca atagacatta taagaaaaga tgcaaataaa 840
 aaaatcaata agtaa 855

<210> 488
 <211> 795
 <212> DNA
 <213> Homo sapiens

<400> 488
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 gataagcaaa ttgagcaatt cttattcaaa gagatcaaaa agcctggaaa ttttggttctt 120
 ggagaagaga caatatctac ttataaagaa gagtatatca aagatgcttt aatatcagag 180
 agtactttta ttattgatcc tattgatgga acttcttctt ttgcagcagg ccttccttca 240
 tatggaatat cgctagcgta tgctagtggc ggcaaaatta ttgaaggagc catttctctt 300

cctttaagcg gagagttttt tattacttct aaagataatg ttttttatgc taaaaaaaac 360
 attggttagct atccttttaa aaaggatttt aataaattta tttttgataa ttctaaatgt 420
 tacaatatcc atagtttact tgcagtttca aggtctatta taaggttatt taatcttgat 480
 atttcttctc atattcatat taatggttct tgtgtatatt cttttgctaa actttttaca 540
 gggtcttata aggcctactt ttcttttgta ggactttggg atattgcagc gtgttttagct 600
 attggttaata aattgggcat gggtggcgaa ttttattgtg gtaataaaat gacattagat 660
 atcttagatt caatgtatat ttttaggcct aataatcata aaagatgggc cttgaaagat 720
 ttttttattt attctgataa taaatcaaca atagacatta taagaaaaga tgcaaataaa 780
 aaaatcaata agtaa 795

<210> 489

<211> 213

<212> PRT

<213> Homo sapiens

<400> 489

Met Ala Phe Tyr Lys Leu Asn Asp Asn Ile Ala Leu Ala Glu Asp Leu
 1 5 10 15
 Leu Lys Tyr Leu Leu Ser Ser Ile Leu Asn Glu Cys Ser Gln Asp Met
 20 25 30
 Asp Phe Leu Glu Asn Tyr Ile Glu Lys Gly Leu Ile Lys Lys Leu Glu
 35 40 45
 Asn Val Ile Asn Ser Asn Phe Glu Val Ile Thr Tyr Thr Lys Ala Ile
 50 55 60
 Glu Ile Leu Glu Asn Ser Lys Lys Asn Phe Glu Ile Lys Pro Tyr Trp
 65 70 75 80
 Gly Ile Asp Leu Gln Thr Asp His Glu Arg Tyr Leu Thr Glu Glu Thr
 85 90 95
 Phe Lys Lys Pro Val Val Val Ile Asp Tyr Pro Lys Asn Phe Lys Ala
 100 105 110
 Phe Tyr Met Lys Ala Asn Lys Asp Asn Lys Thr Val Lys Gly Met Asp
 115 120 125
 Ile Leu Val Pro Lys Ile Gly Glu Ile Ile Gly Gly Ser Glu Arg Glu
 130 135 140
 Asp Asp Leu Gln Lys Leu Glu Asn Arg Ile Lys Glu Leu Asn Leu Asn
 145 150 155 160
 Ile Glu His Leu Asn Trp Tyr Leu Asp Leu Arg Arg Phe Gly Ser Ala
 165 170 175
 Pro His Ser Gly Phe Gly Leu Gly Leu Glu Arg Leu Val Gln Tyr Ser
 180 185 190
 Thr Gly Ile Ser Asn Ile Arg Asp Ser Ile Pro Phe Pro Arg Thr Pro
 195 200 205
 Lys Asn Leu Tyr Phe
 210

<210> 490

<211> 186

<212> PRT

<213> Homo sapiens

<400> 490

Cys Ser Gln Asp Met Asp Phe Leu Glu Asn Tyr Ile Glu Lys Gly Leu
1 5 10 15
Ile Lys Lys Leu Glu Asn Val Ile Asn Ser Asn Phe Glu Val Ile Thr
20 25 30
Tyr Thr Lys Ala Ile Glu Ile Leu Glu Asn Ser Lys Lys Asn Phe Glu
35 40 45
Ile Lys Pro Tyr Trp Gly Ile Asp Leu Gln Thr Asp His Glu Arg Tyr
50 55 60
Leu Thr Glu Glu Thr Phe Lys Lys Pro Val Val Val Ile Asp Tyr Pro
65 70 75 80
Lys Asn Phe Lys Ala Phe Tyr Met Lys Ala Asn Lys Asp Asn Lys Thr
85 90 95
Val Lys Gly Met Asp Ile Leu Val Pro Lys Ile Gly Glu Ile Ile Gly
100 105 110
Gly Ser Glu Arg Glu Asp Asp Leu Gln Lys Leu Glu Asn Arg Ile Lys
115 120 125
Glu Leu Asn Leu Asn Ile Glu His Leu Asn Trp Tyr Leu Asp Leu Arg
130 135 140
Arg Phe Gly Ser Ala Pro His Ser Gly Phe Gly Leu Gly Leu Glu Arg
145 150 155 160
Leu Val Gln Tyr Ser Thr Gly Ile Ser Asn Ile Arg Asp Ser Ile Pro
165 170 175
Phe Pro Arg Thr Pro Lys Asn Leu Tyr Phe
180 185

<210> 491

<211> 642

<212> DNA

<213> Homo sapiens

<400> 491

atggctttttt ataagcttaa cgacaatatt gccctagcag aagatctctt gaaatatctt 60
ttaagttcaa ttttaaacga atgctcacia gatatggatt ttttagaaaa ttacattgaa 120
aaaggtttaa ttaaaaaact agaaaatgta ataaattcaa attttgaggt tattacctat 180
actaaagcaa ttgaaattct tgaaaaactca aaaaaaaatt ttgaaataaa accttactgg 240
ggaatagatt tgcaaacaga tcacgaaaga tacctaacag aagagacttt taaaaaaccg 300
gtagtgggtca ttgattatcc aaaaaatttc aaagcattttt acatgaaagc aaataaagac 360
aataaaactg ttaaaggaat ggacatactt gttccaaaaa ttggagagat tataggggga 420
agcgaaagag aagatgacct tcaaaaatta gaaaatagaa taaaagaatt aaacttaaac 480
attgaacatc taaactggta tcttgatcta agaagatttg gctcggctcc tcattctggc 540
tttggacttg gacttgaaag attggtgcaa tactcaacag gaatatctaa tataagagat 600
tcaataccat tccaaggac tcctaaaaat ctttatTTTT aa 642

<210> 492

<211> 561

<212> DNA
<213> Homo sapiens

<400> 492
tgctcacaag atatggattt tttagaaaat tacattgaaa aagggtttaat taaaaaacta 60
gaaaatgtaa taaattcaaa ttttgagggtt attacctata cttaaagcaat tgaaattctt 120
gaaaactcaa aaaaaaattt tgaaataaaa ccttactggg gaatagattt gcaaacagat 180
cacgaaagat acctaacaga agagactttt aaaaaaccgg tagtggtcat tgattatcca 240
aaaaatttca aagcatttta catgaaagca aataaagaca ataaaactgt taaaggaatg 300
gacatacttg ttccaaaaat tggagagatt atagggggaa gcgaaagaga agatgacctt 360
caaaaattag aaaatagaat aaaagaatta aacttaaaca ttgaacatct aaactgggtat 420
cttgatctaa gaagatttgg ctgggctcct cattctggct ttggacttgg acttgaaaga 480
ttggtgcaat actcaacagg aatatctaata ataagagatt caataccatt cccaaggact 540
cctaaaaatc tttattttta a 561

<210> 493
<211> 175
<212> PRT
<213> Homo sapiens

<400> 493
Met Lys Ile Leu Arg Leu Cys Leu Leu Phe Leu Phe Phe Ala Cys Thr
1 5 10 15
Phe Asp Tyr Asp Glu Tyr Ser Ser Arg Ser Asp Val Ala Lys Lys Phe
20 25 30
Pro Ser Ile Gln Ile Leu Gly Ile Lys Tyr Tyr Asp Val Val Tyr Asn
35 40 45
Lys Glu Gln Thr Val Leu Asn Ser Leu Ser Phe Ser Tyr Phe Asn Asp
50 55 60
Tyr Lys Ile Tyr Lys Ala Glu Asn Gly Arg Phe Leu Tyr His Ser Leu
65 70 75 80
Asp Asn Glu Ile Ser Gly Lys Phe Asn Asn Leu Glu Gly Ser Tyr Ile
85 90 95
Thr Lys Asp Leu Asp Met Arg Asp Ser Val Glu Phe Lys Ile Glu Asp
100 105 110
Lys Asn Asn Tyr Tyr Leu Leu Asn Ser Asn Arg Leu Leu Trp Lys Asn
115 120 125
Lys Asp Lys Lys Leu Gln Ser Pro Pro Asn Glu Leu Val Leu Ile Arg
130 135 140
Phe Asn Asp Ser Lys Ile Asn Gly Lys Gly Phe Ser Tyr Phe Leu Lys
145 150 155 160
Ser Asn Val Phe Tyr Phe Asp Ser Gly Val Glu Gly Ile Met Asn
165 170 175

<210> 494
<211> 161
<212> PRT
<213> Homo sapiens

<400> 494

Cys Thr Phe Asp Tyr Asp Glu Tyr Ser Ser Arg Ser Asp Val Ala Lys
 1 5 10 15
 Lys Phe Pro Ser Ile Gln Ile Leu Gly Ile Lys Tyr Tyr Asp Val Val
 20 25 30
 Tyr Asn Lys Glu Gln Thr Val Leu Asn Ser Leu Ser Phe Ser Tyr Phe
 35 40 45
 Asn Asp Tyr Lys Ile Tyr Lys Ala Glu Asn Gly Arg Phe Leu Tyr His
 50 55 60
 Ser Leu Asp Asn Glu Ile Ser Gly Lys Phe Asn Asn Leu Glu Gly Ser
 65 70 75 80
 Tyr Ile Thr Lys Asp Leu Asp Met Arg Asp Ser Val Glu Phe Lys Ile
 85 90 95
 Glu Asp Lys Asn Asn Tyr Tyr Leu Leu Asn Ser Asn Arg Leu Leu Trp
 100 105 110
 Lys Asn Lys Asp Lys Lys Leu Gln Ser Pro Pro Asn Glu Leu Val Leu
 115 120 125
 Ile Arg Phe Asn Asp Ser Lys Ile Asn Gly Lys Gly Phe Ser Tyr Phe
 130 135 140
 Leu Lys Ser Asn Val Phe Tyr Phe Asp Ser Gly Val Glu Gly Ile Met
 145 150 155 160

Asn

<210> 495
 <211> 528
 <212> DNA
 <213> Homo sapiens

<400> 495
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 gagtattcta gtagatctga tgtggccaaa aagtttcctt caatacaaat attaggaatc 120
 aagtattatg atgttggtata caataaagag caaacggtt taaattcctt aagcttttagt 180
 tatttcaatg actataaaat ttataaggca gagaatggaa ggttttttata tcattcccta 240
 gataatgaaa tttcagggaa gttaataaat ttggaagggt cttatattac aaaggatttg 300
 gatatgagag attctgtaga atttaaaata gaagataaaa ataattatta ttgcttaaat 360
 tcaaataggc ttttatggaa gaataaagac aagaagttgc aatccccccc aaatgagcta 420
 gtattaatta gatttaatga tagcaaaata aacggaaaag gattttctta ttttttaaag 480
 agcaatgttt tttattttga ttctggagtt gaaggaatca tgaattga 528

<210> 496
 <211> 486
 <212> DNA
 <213> Homo sapiens

<400> 496
 tgtacttttg attatgatga gtattctagt agatctgatg tggccaaaaa gtttccttca 60
 atacaaatat taggaatcaa gtattatgat gttgtatata ataaagagca aaccggttta 120
 aattccttaa gcttttagtta tttcaatgac tataaaattt ataaggcaga gaatggaagg 180
 tttttatata attccctaga taatgaaatt tcagggaagt ttaataattt ggaagggttct 240
 tatattacaa aggatttgga tatgagagat tctgtagaat ttaaaataga agataaaaaat 300

aattattatt tgcttaattc aaataggctt ttatggaaga ataaagacaa gaagttgcaa 360
 tcccccccaa atgagctagt attaattaga tttaatgata gcaaaaataaa cggaagga 420
 ttttcttatt ttttaaagag caatgtttt tattttgatt ctggagttga aggaatcatg 480
 aattga 486

<210> 497
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 497
 Met Lys Gln Lys Leu Ser Trp Ile Leu Leu Phe Cys Phe Leu Ser Cys
 1 5 10 15
 Arg Ser Glu Ser Arg Leu Ala Glu Asn Val Leu Ile Glu Phe Phe Asp
 20 25 30
 Ser Ile Lys Asn Phe Gln Ser Ser Pro Glu Ile Phe Phe Asn Tyr Leu
 35 40 45
 Asn Ile Pro Ser Asp Asp Asp Leu Lys Ala Lys Ile Arg Gly Leu Lys
 50 55 60
 Ser Gln Ala Lys Asp Asp Phe Ile Phe Tyr Pro Leu Phe Phe Asn Asn
 65 70 75 80
 Leu Arg Tyr Glu Ile Ile Gly Arg Lys Asn Ile Ser Lys Gly Phe Glu
 85 90 95
 Phe Glu Val Val Ile Lys Asn Ile Asn Phe Gln Asn Gly Ile Glu Lys
 100 105 110
 Phe Leu Ala Lys Leu Asn Lys Ile Glu Gly Arg Ser Leu Asn Ile Lys
 115 120 125
 Asn Leu Glu Lys Lys Glu Arg Lys Lys Ile Phe Asp Asn Leu Ile Asn
 130 135 140
 Glu Val Ile Gly Glu Leu Asp Asp Phe Asp Tyr Thr Glu Val Val His
 145 150 155 160
 Phe Phe Arg Val Val Lys Ser Ser Ser Glu Ser Tyr Lys Ile Glu Leu
 165 170 175
 Leu Gly Asp Val Leu Asn Ile Gln Ser Arg Asn Lys Leu Ile Asn Asp
 180 185 190
 Leu Phe Leu Val Leu Ser Pro Gly Ile
 195 200

<210> 498
 <211> 190
 <212> PRT
 <213> Homo sapiens

<400> 498
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 Ile Glu Phe Phe Asp Ser Ile Lys Asn Phe Gln Ser Ser Pro Glu Ile

20

25

30

Phe Phe Asn Tyr Leu Asn Ile Pro Ser Asp Asp Asp Leu Lys Ala Lys
35 40 45

Ile Arg Gly Leu Lys Ser Gln Ala Lys Asp Asp Phe Ile Phe Tyr Pro
50 55 60

Leu Phe Phe Asn Asn Leu Arg Tyr Glu Ile Ile Gly Arg Lys Asn Ile
65 70 75 80

Ser Lys Gly Phe Glu Phe Glu Val Val Ile Lys Asn Ile Asn Phe Gln
85 90 95

Asn Gly Ile Glu Lys Phe Leu Ala Lys Leu Asn Lys Ile Glu Gly Arg
100 105 110

Ser Leu Asn Ile Lys Asn Leu Glu Lys Lys Glu Arg Lys Lys Ile Phe
115 120 125

Asp Asn Leu Ile Asn Glu Val Ile Gly Glu Leu Asp Asp Phe Asp Tyr
130 135 140

Thr Glu Val Val His Phe Phe Arg Val Val Lys Ser Ser Ser Glu Ser
145 150 155 160

Tyr Lys Ile Glu Leu Leu Gly Asp Val Leu Asn Ile Gln Ser Arg Asn
165 170 175

Lys Leu Ile Asn Asp Leu Phe Leu Val Leu Ser Pro Gly Ile
180 185 190

<210> 499

<211> 606

<212> DNA

<213> Homo sapiens

<400> 499

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cctgaaatat tttttaatta tttaaattt ccaagtgatg atgatctgaa ggcaaaaatt 180
cgtgggttga aatctcaggc aaaggatgat ttcatTTTTT atcctttgtt ttttaataat 240
ctaagatatg agataatagg tagaaaaaat atttctaagg gctttgaatt tgaagttgtt 300
attaaaaata ttaactttca aaacggtata gaaaaatttt tggctaaatt aaataaaaatt 360
gaaggagat ctttaaatat taaaaattta gaaaaaaaag agcgtaaaaa aatatttgac 420
aatttaataa atgaagttat tggagagttg gatgattttg attacactga agttgttcat 480
tttttagag tagttaagag ttcttctgaa agttataaaa tagagctttt aggagatgtt 540
ttaaatatac agtctagaaa taagcttatt aatgatcttt ttttggtttt atcgccctgga 600
atttaa 606

<210> 500

<211> 573

<212> DNA

<213> Homo sapiens

<400> 500

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agtgatgatg atctgaaggc aaaaattcgt ggggtgaaat ctcaggcaaa ggatgatttc 180
atTTTTTatc ctttgTTTTt taataatcta agatatgaga taataggtag aaaaaattt 240

tctaagggtt ttgaatttga agttgttatt aaaaatatta actttcaaaa cggtatagaa 300
aaatttttgg ctaaattaaa taaaattgaa gggagatctt taaatattaa aaatttagaa 360
aaaaaagagc gtaaaaaaat atttgacaat ttaataaatg aagttattgg agagttggat 420
gatttttgatt acactgaagt tgttcatttt tttagagtag ttaagagttc ttctgaaagt 480
tataaaatag agctttttagg agatgtttta aatatacagt ctagaaataa gcttattaat 540
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<210> 501
<211> 167
<212> PRT
<213> Homo sapiens

<400> 501
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Ser Arg Asn Gly Ile Glu Ser Ser Ser Lys Lys Ile Lys Ile Ser Met
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Leu Val Asp Gly Val Leu Asp Asp Lys Ser Phe Asn Ser Ser Ala Asn
35 40 45
Glu Ala Leu Leu Arg Leu Lys Lys Asp Phe Pro Glu Asn Ile Glu Glu
50 55 60
Val Phe Ser Cys Ala Ile Ser Gly Val Tyr Ser Ser Tyr Val Ser Asp
65 70 75 80
Leu Asp Asn Leu Lys Arg Asn Gly Ser Asp Leu Ile Trp Leu Val Gly
85 90 95
Tyr Met Leu Thr Asp Ala Ser Leu Leu Val Ser Ser Glu Asn Pro Lys
100 105 110
Ile Ser Tyr Gly Ile Ile Asp Pro Ile Tyr Gly Asp Asp Val Gln Ile
115 120 125
Pro Glu Asn Leu Ile Ala Val Val Phe Arg Val Glu Pro Arg Cys Phe
130 135 140
Phe Gly Trp Leu Tyr Cys Ser Gln Lys Lys Leu Phe Trp Gln Asn Arg
145 150 155 160
Phe Tyr Arg Gly Asn Glu Gly
165

<210> 502
<211> 153
<212> PRT
<213> Homo sapiens

<400> 502
Cys Phe Ser Arg Asn Gly Ile Glu Ser Ser Ser Lys Lys Ile Lys Ile
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Ser Met Leu Val Asp Gly Val Leu Asp Asp Lys Ser Phe Asn Ser Ser
20 25 30
Ala Asn Glu Ala Leu Leu Arg Leu Lys Lys Asp Phe Pro Glu Asn Ile
35 40 45

Glu Glu Val Phe Ser Cys Ala Ile Ser Gly Val Tyr Ser Ser Tyr Val
50 55 60

Ser Asp Leu Asp Asn Leu Lys Arg Asn Gly Ser Asp Leu Ile Trp Leu
65 70 75 80

Val Gly Tyr Met Leu Thr Asp Ala Ser Leu Leu Val Ser Ser Glu Asn
85 90 95

Pro Lys Ile Ser Tyr Gly Ile Ile Asp Pro Ile Tyr Gly Asp Asp Val
100 105 110

Gln Ile Pro Glu Asn Leu Ile Ala Val Val Phe Arg Val Glu Pro Arg
115 120 125

Cys Phe Phe Gly Trp Leu Tyr Cys Ser Gln Lys Lys Leu Phe Trp Gln
130 135 140

Asn Arg Phe Tyr Arg Gly Asn Glu Gly
145 150

<210> 503

<211> 504

<212> DNA

<213> Homo sapiens

<400> 503

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aaatctttta attctagtgc taatgaggct ttattacgct tgaaaaaaga ttttccagaa 180
aatattgaag aagttttttc ttgtgctatt tctggagttt attctagtta tgtttcagat 240
cttgataatt taaaaaggaa tggctcagac ttgatttggc ttgtagggta catgcttacg 300
gacgcattctt tattgggttc atcggagaat ccaaaaatta gctatggaat aatagatccc 360
atztatgggtg atgatgttca gattcctgaa aacttgattg ctgttgtttt cagagtagag 420
ccaaggtgct tttttggctg gctatatattgc agccaaaaaa agcttttctg gcaaaatagg 480
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<210> 504

<211> 462

<212> DNA

<213> Homo sapiens

<400> 504

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aaaaaagatt ttccagaaaa tattgaagaa gttttttctt gtgctatttc tggagtttat 180
tctagttagt tttcagatct tgataattta aaaaggaatg gctcagactt gatttggctt 240
gtaggggtaca tgcttacgga cgcattctta ttgggttcat cggagaatcc aaaaattagc 300
tatggaataa tagatcccat ttatgggtgat gatgttcaga ttcttgaaaa cttgattgct 360
gttggttttca gagtagagcc aagggtgcttt ttgggtggc tatattgcag ccaaaaaaag 420
cttttctggc aaaatagggt ttataggggg aatgaagggt aa 462

<210> 505

<211> 264

<212> PRT

<213> Homo sapiens

<400> 505

Met Lys Arg Ile Leu Ala Met His Asp Ile Ser Ser Met Gly Arg Thr

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Asn Glu His Phe Asp Ile Leu Tyr Thr Gly Phe Leu Gly Ser Glu Lys		
50	55	60
Gln Gln Ile Thr Ile Glu Lys Ile Ile Lys Leu Ile Lys Phe Glu Lys		
65	70	75
Ile Val Ile Asp Pro Val Phe Ala Asp Asp Gly Glu Ile Tyr Pro Ile		
85	90	95
Phe Asp Asn Lys Ile Ile Ser Gly Phe Arg Lys Ile Ile Lys Tyr Ala		
100	105	110
Asn Ile Ile Thr Pro Asn Ile Thr Glu Leu Glu Met Leu Ser Lys Ser		
115	120	125
Ser Lys Leu Asn Asn Lys Asp Asp Ile Ile Lys Ala Ile Leu Asn Leu		
130	135	140
Asp Thr Lys Ala Thr Val Val Val Thr Ser Val Lys Arg Gly Asn Leu		
145	150	155
Leu Gly Asn Ile Cys Tyr Asn Pro Lys Asn Lys Glu Tyr Ser Glu Phe		
165	170	175
Phe Leu Glu Gly Leu Glu Gln Asn Phe Ser Gly Thr Gly Asp Leu Phe		
180	185	190
Thr Ser Leu Leu Ile Gly Tyr Leu Glu Lys Phe Glu Thr Glu Gln Ala		
195	200	205
Leu Glu Lys Thr Thr Lys Ala Ile His Leu Ile Ile Lys Glu Ser Ile		
210	215	220
Lys Glu Asn Val Ser Lys Lys Glu Gly Val Arg Ile Glu Asn Phe Leu		
225	230	235
240		

Lys Asn Thr Phe

<210> 507

<211> 795

<212> DNA

<213> Homo sapiens

<400> 507

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tctgcttcca cagcttataa aaaatttgaa atagtggatt taaccgatca tttagaaaaa 180
tttatcaata tatggaaaga acaaaatgag cactttgaca tactctatac cggatttctg 240
ggaagcgaaa aacaacaaat aacaatagag aaaataatta aattaataaa atttgaaaaa 300
attgtaattg atcctgtgtt tgctgacgat ggagaaattt accctatatt tgataataaa 360
ataattagtg gatttagaaa aatcataaag tacgcaaaca taataacacc caatatcaca 420
gaacttgaaa tgctaagcaa aggtcaaaaa cttaacaaca aagatgatat cataaaagca 480
atattaaatc ttgatacaaa agcgacggta gttgttacaa gcgttaaaag gggaaatctc 540
ttgggaaaca tttgctacaa tcctaaaaac aaagaatact cggagttttt tttagaagga 600

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ttagaacaaa atttcagtgg aacaggagat ttattttacca gcttacttat aggatatttg 660
 gaaaaatttg aaacagagca agccttagaa aaaacaacaa aggctattca cctaataata 720
 aaagagtcaa ttaaagaaaa tgtttcaaaa aaagaagggg tccgaattga aaatttctta 780
 aaaaatacat tttga 795

<210> 508

<211> 735

<212> DNA

<213> Homo sapiens

<400> 508

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 tttatcaata tatggaaaga acaaaatgag cactttgaca tactctatac cggatttctg 180
 ggaagcgaaa aacaacaaat aacaatagag aaaataatta aattaataaa atttgaaaaa 240
 attgtaattg atcctgtggt tgctgacgat ggagaaattt accctatatt tgataataaa 300
 ataattagtg gatttagaaa aatcataaag tacgcaaaca taataacacc caatatcaca 360
 gaacttgaaa tgctaagcaa aagctcaaaa cttacaaca aagatgatat cataaaagca 420
 atattaaatc ttgatacaaa agcgacggta gttgttaca gcgttaaaag gggaaatctc 480
 ttgggaaaca tttgctacaa tcctaaaaac aaagaatact cggagttttt tttagaagga 540
 ttagaacaaa atttcagtgg aacaggagat ttattttacca gcttacttat aggatatttg 600
 gaaaaatttg aaacagagca agccttagaa aaaacaacaa aggctattca cctaataata 660
 aaagagtcaa ttaaagaaaa tgtttcaaaa aaagaagggg tccgaattga aaatttctta 720
 aaaaatacat tttga 735

<210> 509

<211> 255

<212> PRT

<213> Homo sapiens

<400> 509

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 20 25 30
 Asp Phe Ser Val Leu Glu Phe Lys Val Ala Asn Phe Asn Leu Asn Asp
 35 40 45
 Asp Phe Ser Gln Gly Leu Leu Asp Ser Ala Tyr Asn Ile Leu Asn Arg
 50 55 60
 Ser Phe Asp Leu Ile Ile Ile Lys Asn Leu Lys Asn Lys Asn Val Leu
 65 70 75 80
 Asp Leu Ile Asn Asn Arg Val Leu Phe Arg Ala Phe Lys Asn Ala Tyr
 85 90 95
 Phe Ile Asp Gln Gly Ser Gly Leu Ser Val Ser Ile Leu Ser Lys Arg
 100 105 110
 Lys Ile Asn Ile Lys Val Leu Ser Val Met Gln Asp Ser Cys Asp Leu
 115 120 125
 Lys Leu Gly Leu Leu Val Asp Phe Lys Phe Glu Asn Asn His Tyr Gly
 130 135 140
 Ile Val Ile Tyr Asn Leu Ser Lys Asp Phe Ile Lys Ser Ile Ala Asn
 145 150 155 160

Leu Gln Ile Ser Glu Gln Ile Leu Tyr Leu Lys Ala Gln Met Asp Lys
 165 170 175
 Leu Met Phe Ile Leu Asp Glu Ser Glu Phe Val Ile Phe Asp Leu Leu
 180 185 190
 Ile Lys Asn Gly Phe Phe Ser Leu Ile Asn Asp Ser Asn Tyr Thr Ser
 195 200 205
 Met Leu Ala Asn Lys Ile Asp Phe Arg Val Phe Ser Asn Phe Phe Ala
 210 215 220
 Arg Val Ser Leu Tyr Ser Phe Met Phe Val Ile Ala Asp Tyr Leu His
 225 230 235 240
 Ser Asn Tyr Val Val Glu Asn Phe Pro Gln Lys Ile Val Ile Asn
 245 250 255
 <210> 510
 <211> 229
 <212> PRT
 <213> Homo sapiens
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 20 25 30
 Tyr Asn Ile Leu Asn Arg Ser Phe Asp Leu Ile Ile Ile Lys Asn Leu
 35 40 45
 Lys Asn Lys Asn Val Leu Asp Leu Ile Asn Asn Arg Val Leu Phe Arg
 50 55 60
 Ala Phe Lys Asn Ala Tyr Phe Ile Asp Gln Gly Ser Gly Leu Ser Val
 65 70 75 80
 Ser Ile Leu Ser Lys Arg Lys Ile Asn Ile Lys Val Leu Ser Val Met
 85 90 95
 Gln Asp Ser Cys Asp Leu Lys Leu Gly Leu Leu Val Asp Phe Lys Phe
 100 105 110
 Glu Asn Asn His Tyr Gly Ile Val Ile Tyr Asn Leu Ser Lys Asp Phe
 115 120 125
 Ile Lys Ser Ile Ala Asn Leu Gln Ile Ser Glu Gln Ile Leu Tyr Leu
 130 135 140
 Lys Ala Gln Met Asp Lys Leu Met Phe Ile Leu Asp Glu Ser Glu Phe
 145 150 155 160
 Val Ile Phe Asp Leu Leu Ile Lys Asn Gly Phe Phe Ser Leu Ile Asn
 165 170 175
 Asp Ser Asn Tyr Thr Ser Met Leu Ala Asn Lys Ile Asp Phe Arg Val
 180 185 190

Phe Ser Asn Phe Phe Ala Arg Val Ser Leu Tyr Ser Phe Met Phe Val
 195 200 205

Ile Ala Asp Tyr Leu His Ser Asn Tyr Val Val Glu Asn Phe Pro Gln
 210 215 220

Lys Ile Val Ile Asn
 225

<210> 511
 <211> 768
 <212> DNA
 <213> Homo sapiens

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 gttgcaaatt ttaatttaaa tgatgatttt tctcaagggt tacttgattc tgcttataat 180
 attctaaatc gaagttttga ttttaataatt attaagaatc ttaagaataa aaatgttctt 240
 gatttaatta ataataagat tttattttaga gcttttaaga atgcttattt tattgatcaa 300
 ggtagtgggc tttctgttag cattctttct aagcgcaaaa taaatattaa agttttaagt 360
 gtaatgcaag attcttgcca tttaaaatta ggattgcttg tggattttta atttgagaat 420
 aatcactatg gtattgttat ttataattta agcaaggatt ttattaaaag tattgccaat 480
 ttgcaaatta gtgaacaaat tttatattta aaagcccaaa tggataaatt gatgtttatt 540
 ttagatgaat ctgaatttgt tatttttgat ttattaatca aaaatggatt ttttagctta 600
 ataatgatt caaactacac ttcaatgtta gcaataaaaa ttgatttttag agttttttct 660
 aatttttttg ctagggtttc tttatattca tttatgtttg taattgcaga ttatttgcatt 720
 agcaattatg ttgttgagaa ttttcctcaa aaaatagtta tcaattga 768

<210> 512
 <211> 690
 <212> DNA
 <213> Homo sapiens

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 gatttaataa ttattaagaa tcttaagaat aaaaatgttc ttgatttaat taataataga 180
 gttttattta gagcttttaa gaatgcttat tttattgatc aaggtagtggt cttttctgtt 240
 agcattcttt ctaagcgcaa aataaatatt aaagttttta gtgtaatgca agattcttgc 300
 gatttaaaat taggattgct tgtggatttt aaatttgaga ataactacta tggatttatt 360
 atttataatt taagcaagga ttttattaaa agtattgcca atttgcaaat tagtgaacaa 420
 attttatatt taaaagccca aatggataaa ttgatgttta ttttagatga atctgaattt 480
 gttatttttg atttattaat caaaaatgga ttttttagct taataaatga ttcaaactac 540
 acttcaatgt tagcaaataa aattgatttt agagtttttt ctaatttttt tgctagggtt 600
 tctttatatt catttatgtt tgtaattgca gattatttgc atagcaatta tgttgttgag 660
 aattttcctc aaaaaatagt tatcaattga 690

<210> 513
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 513
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 20 25 30

Ser Lys Glu Leu Ile Glu Glu Tyr Asp Val Ile Ser Thr Glu Ser Phe
 35 40 45
 Val Val Glu Gln Phe Thr Lys Asn Ala Leu Lys Arg Ile Ile Pro Val
 50 55 60
 Asp Thr Asp Ala Val Val Ile Asp Phe Asp Asp Leu Gly Lys Ser
 65 70 75 80
 Ala Leu Val Thr His Tyr Cys Asn Leu Leu Gly Leu Lys Glu Ile Cys
 85 90 95
 Val Lys Thr Glu Asn Arg Asp Asp Ala Glu Ile Leu Lys Thr Leu Gly
 100 105 110
 Ala Thr Lys Ile Ile Phe Pro Ser Lys Asp Ala Ala Arg Arg Leu Thr
 115 120 125
 Pro Leu Leu Val Ser Pro Asn Leu Ser Thr Tyr Asn Ile Ile Gly Tyr
 130 135 140
 Asp Ile Ile Val Ala Glu Thr Val Ile Pro Lys Glu Tyr Val Gly Lys
 145 150 155 160
 Thr Leu Phe Glu Ala Asp Leu Arg Arg Glu Cys Gly Ile Thr Val Ile
 165 170 175
 Ala Val Arg Asn Leu Ser Asn Ser Arg Tyr Glu Phe Val Asp Gly Asp
 180 185 190
 Tyr Phe Phe Leu Lys Asp Asp Lys Ile Val Ile Cys Gly Lys Pro Asp
 195 200 205
 Ser Ile Glu Asn Phe Thr Asn Asn Lys Asp Leu Ile Lys Asp Leu Ile
 210 215 220
 Ser Gly Ser Lys Glu Asp Glu Asn Leu Asn Lys Asp Ala Glu Lys Lys
 225 230 235 240
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 245 250 255
 Arg Lys Asp Asn
 260

<210> 514
 <211> 236
 <212> PRT
 <213> Homo sapiens

<400> 514
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 20 25 30
 Ala Leu Lys Arg Ile Ile Pro Val Asp Thr Asp Ala Val Val Ile Asp
 35 40 45

Phe Asp Asp Asp Leu Gly Lys Ser Ala Leu Val Thr His Tyr Cys Asn
 50 55 60
 Leu Leu Gly Leu Lys Glu Ile Cys Val Lys Thr Glu Asn Arg Asp Asp
 65 70 75 80
 Ala Glu Ile Leu Lys Thr Leu Gly Ala Thr Lys Ile Ile Phe Pro Ser
 85 90 95
 Lys Asp Ala Ala Arg Arg Leu Thr Pro Leu Leu Val Ser Pro Asn Leu
 100 105 110
 Ser Thr Tyr Asn Ile Ile Gly Tyr Asp Ile Ile Val Ala Glu Thr Val
 115 120 125
 Ile Pro Lys Glu Tyr Val Gly Lys Thr Leu Phe Glu Ala Asp Leu Arg
 130 135 140
 Arg Glu Cys Gly Ile Thr Val Ile Ala Val Arg Asn Leu Ser Asn Ser
 145 150 155 160
 Arg Tyr Glu Phe Val Asp Gly Asp Tyr Phe Phe Leu Lys Asp Asp Lys
 165 170 175
 Ile Val Ile Cys Gly Lys Pro Asp Ser Ile Glu Asn Phe Thr Asn Asn
 180 185 190
 Lys Asp Leu Ile Lys Asp Leu Ile Ser Gly Ser Lys Glu Asp Glu Asn
 195 200 205
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 225 230 235

<210> 515
 <211> 783
 <212> DNA
 <213> Homo sapiens

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 gctcttggtta ctactattg taatctttta ggtttgaaag aaatatgcgt taagacagaa 300
 aatagagatg atgctgaaat cttaaaaact cttggggcaa caaaaattat attccaagt 360
 aaagatgctg caagaagatt aactccatta ttagtatctc caaagaata tgttggttaa 480
 attattgggt atgatattat tgttgctgaa actgttattc ccaaagaata tgttggttaa 480
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 aaagatttaa ttccaggctc taaagaggat gaaaatttaa ataaagatgc tgagaaaaaa 720
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 tag 783

<210> 516
 <211> 711

<212> DNA

<213> Homo sapiens

<400> 516

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gatacagacg ctggtggtat tgattttgat gatgatcttg gcaaaagtgc tcttgttact 180
cactattgta atcttttagg tttgaaagaa atatgcgtaa agacagaaaa tagagatgat 240
gctgaaatct taaaaactct tggggcaaca aaaattatat ttccaagtaa agatgctgca 300
agaagattaa ctccattatt agtatctcca aatctttcaa cttataatat tattgggtat 360
gatattattg ttgctgaaac tgttattccc aaagaatatg ttggtaaaac tctttttgaa 420
gccgatctta gaagagaatg tgggattaca gttattgctg ttagaaaatt aagtaattct 480
aggtatgaat ttgttgatgg cgattatttt tttttaaaag atgataaaat tgtaatttgt 540
ggtaaaccag atagcattga aaattttaca aataataaag atttaattaa agattttaatt 600
tcaggctcta aagaggatga aaattttaat aaagatgctg agaaaaaatc tagattttta 660
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<210> 517

<211> 222

<212> PRT

<213> Homo sapiens

<400> 517

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      20             25             30
Tyr Asp Lys Arg Ile Lys Lys Phe Leu Asp Lys Asn Lys Ile Glu Tyr
      35             40             45
Lys Ile Asp Ser Glu Asn Asp Phe Ile Ala Phe Lys Asp Ile Asn Asn
      50             55             60
Asn Glu Lys Glu Glu Val Ile Ile Arg Ser Arg Leu Asn Ser Tyr Lys
      65             70             75             80
Asn Ser Lys Ile Arg Glu Ile Phe Gly Ile Val Lys Val Phe Asp Ile
      85             90             95
Asn Thr Pro Lys Ile Lys Glu Ile Ser Asp Ser Leu Met Ser Asp Ser
      100            105            110
Tyr Asn Asn Arg Val Phe Gly Ser Trp Glu Ile Ile His Asn Ala Glu
      115            120            125
Arg Gly Ile Asn Ser Leu Val Tyr Ile Val Lys Ala Glu Glu Phe Ala
      130            135            140
Asn Asp Thr Phe Leu Leu Asp Ala Ile Asp Glu Ile Ala Ser Thr Ile
      145            150            155            160
Ser Ile Phe Lys Lys Ile Ile Thr Thr Asn Asn Glu Asn Ile Asp Asn
      165            170            175
Asn Glu Glu Asn Asn Asn Thr Asn Glu Ser Asn Glu Gln Pro Thr Leu
      180            185            190
Lys Gln Glu Lys Thr Asn Ser Thr Lys Glu Ser Asn Asn Glu Leu Lys
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aattcaaaga taagagaaat atttggaatt gttaaagtat ttgatataaa cacaccaaaa 300
 ataaaagaaa tatctgactc gcttatgagc gatagttata ataacagagt atttggatcg 360
 tgggagatta ttcataatgc agaaagagga atcaactctt tggatatatat tgtaaaagca 420
 gaagaatttg caaatgatac atttttgctt gatgcaattg atgagattgc ctcaacaata 480
 agtatttttca aaaaaataat aacaaccaac aacgaaaaca ttgataataa tgaagaaaat 540
 aacaatacaa atgaatcaaa tgaacagccc accttaaaagc aagaaaaaac aaattcaaca 600
 aaagaatcta ataacgaact taaagaagat caaatagaag aagaacttca agaaatcaaa 660
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<210> 520

<211> 594

<212> DNA

<213> Homo sapiens

<400> 520

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 gaaaaagaag aagtaatcat cagatcaaga ctaaactcat ataaaaattc aaagataaga 180
 gaaatatttg gaattgttaa agtattttgat ataaacacac caaaaataaa agaaatatct 240
 gactcgctta tgagcgatag ttataataac agagtatttg gatcgtggga gattattcat 300
 aatgcagaaa gaggaatcaa ctctttggta tatattgtaa aagcagaaga atttgcaaat 360
 gatacatttt tgcttgatgc aattgatgag attgcctcaa caataagtat tttcaaaaaa 420
 ataataacaa ccaacaacga aaacattgat aataatgaag aaaataacaa tacaatatga 480
 tcaaatgaac agccccacctt aaagcaagaa aaaacaaatt caacaaaaga atctaataac 540
 gaacttaag aagatcaaatt agaagaagaa cttcaagaaa tcaagccca ataa 594

<210> 521

<211> 175

<212> PRT

<213> Homo sapiens

<400> 521

Met Arg Val Asp Leu Leu Pro Leu Val Glu Leu Ser Leu Tyr Ile Asn
 1 5 10 15

Leu Ser Phe Cys Cys Lys Asp Phe Ser Ile Phe Asn Arg Ile Leu Glu
 20 25 30

Glu Leu Lys Cys His Leu Ile Leu Leu Gly His Pro Ile Ile Lys Thr
 35 40 45

Leu Tyr Ile Lys His Val Asp Phe Cys Leu Ser Arg Gln Asp Asn Leu
 50 55 60

Lys Phe Ile Phe Thr Ser Leu Ser Lys Tyr Ile Asn Leu Glu Leu Leu
 65 70 75 80

Glu Glu Phe Thr Leu Glu Ile Ile Pro Gly Tyr Val Asp Phe Glu Lys
 85 90 95

Phe Lys Leu Leu Asp Glu Phe Cys Ile Thr Arg Ile Asn Leu Asn Val
 100 105 110

Gln Ser Phe Ser Leu Glu Phe Arg Lys Ile Val Gly Ile Pro Glu Ile
 115 120 125

Ser Tyr Lys Lys Leu Asn Ile Leu Ile Asn Asn Ile Arg Lys Phe Pro
 130 135 140

Phe Asp Leu Asn Ile Asp Met Thr Val Asn Met Pro Leu Gln Lys Lys

145

150

155

160

Ser His Leu Lys Arg Asp Leu Gln Arg Ile Ala Phe Ile Tyr Ala
 165 170 175

<210> 522

<211> 155

<212> PRT

<213> Homo sapiens

<400> 522

Cys Lys Asp Phe Ser Ile Phe Asn Arg Ile Leu Glu Glu Leu Lys Cys
 1 5 10 15

His Leu Ile Leu Leu Gly His Pro Ile Ile Lys Thr Leu Tyr Ile Lys
 20 25 30

His Val Asp Phe Cys Leu Ser Arg Gln Asp Asn Leu Lys Phe Ile Phe
 35 40 45

Thr Ser Leu Ser Lys Tyr Ile Asn Leu Glu Leu Leu Glu Glu Phe Thr
 50 55 60

Leu Glu Ile Ile Pro Gly Tyr Val Asp Phe Glu Lys Phe Lys Leu Leu
 65 70 75 80

Asp Glu Phe Cys Ile Thr Arg Ile Asn Leu Asn Val Gln Ser Phe Ser
 85 90 95

Leu Glu Phe Arg Lys Ile Val Gly Ile Pro Glu Ile Ser Tyr Lys Lys
 100 105 110

Leu Asn Ile Leu Ile Asn Asn Ile Arg Lys Phe Pro Phe Asp Leu Asn
 115 120 125

Ile Asp Met Thr Val Asn Met Pro Leu Gln Lys Lys Ser His Leu Lys
 130 135 140

Arg Asp Leu Gln Arg Ile Ala Phe Ile Tyr Ala
 145 150 155

<210> 523

<211> 528

<212> DNA

<213> Homo sapiens

<400> 523

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 ctgggtcatc caattataaa aacactttac attagcacg tagatttttg tttatctagg 180
 caagataatt taaaatttat tttcacttct ttgtccaagt atattaattt ggagttatta 240
 gaagaattta ctttagaaat tattccgggt tatgttgatt ttgaaaaatt caaacttttg 300
 gatgaatttt gtattactag aattaatctt aatgttcaaa gtttttcttt agagttttaga 360
 aagattgtgg ggataccgga aatttcttat aaaaaattga atattttgat taacaatatt 420
 agaaagtttc cttttgattt gaatattgac atgactgtca atatgccttt gcaaaaaaaa 480
 tctcatctca agcgagattt gcaaagaatt gctttcatat atgcctga 528

<210> 524

<211> 468

<212> DNA

<213> Homo sapiens

<400> 524

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ctgggtcatc caattataaa aacactttac attaagcacg tagatttttg tttatctagg 120
caagataatt taaaatttat tttcacttct ttgtccaagt atattaattt ggagttatta 180
gaagaattta ctttagaaat tattccgggt tatgttgatt ttgaaaaatt caaacttttg 240
gatgaatttt gtattactag aattaatctt aatgttcaaa gtttttcttt agagttttaga 300
aagattgtgg ggatacccgga aatttcttat aaaaaattga atattttgat taacaatatt 360
agaaagtttc cttttgattt gaattattgac atgactgtca atatgccttt gcaaaaaaaaa 420
tctcatctca agcgagattt gcaaagaatt gctttcatat atgcctga 468
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<210> 525

<211> 274

<212> PRT

<213> Homo sapiens

<400> 525

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Met Leu Lys Thr Leu Thr Lys Ile Ile Thr Ile Ser Cys Leu Ile Val
  1                      5                      10                      15
```

```
Gly Cys Ala Ser Leu Pro Tyr Thr Pro Pro Lys Gln Asn Leu Asn Tyr
                20                      25                      30
```

```
Leu Met Glu Leu Leu Pro Gly Ala Asn Leu Tyr Ala His Val Asn Leu
        35                      40                      45
```

```
Ile Lys Asn Arg Ser Ile Tyr Asn Ser Leu Ser Pro Lys Tyr Lys Ser
        50                      55                      60
```

```
Val Leu Gly Leu Ile Ser Asn Leu Tyr Phe Ser Tyr Lys Lys Glu Asn
        65                      70                      75                      80
```

```
Asn Asp Phe Ala Leu Leu Ile Met Gly Asn Phe Pro Lys Asp Ile Phe
                85                      90                      95
```

```
Trp Gly Ile His Lys Asn Arg Asn Thr Glu Ser Ile Gly Asn Ile Phe
        100                      105                      110
```

```
Thr Asn Pro Lys Trp Lys Leu Lys Asn Ser Asn Ile Tyr Ile Ile Pro
        115                      120                      125
```

```
Asn Lys Ala Arg Thr Ser Ile Ala Ile Thr Gln Lys Asp Ile Thr Ala
        130                      135                      140
```

```
Lys Asp Asn Asn Met Leu Thr Thr Lys Tyr Ile Gly Glu Ile Glu Lys
        145                      150                      155                      160
```

```
Asn Glu Met Phe Phe Trp Ile Gln Asp Pro Thr Leu Leu Leu Pro Asn
                165                      170                      175
```

```
Gln Ile Val Ser Ser Lys Asn Leu Ile Pro Phe Ser Ser Gly Thr Leu
        180                      185                      190
```

```
Ser Ile Asn Ser Leu Asn Gln Glu Glu Tyr Ile Phe Lys Ser Leu Ile
        195                      200                      205
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```
Lys Thr Asn Asn Pro Pro Ile Leu Lys Ile Leu Ser Lys Lys Leu Ile
        210                      215                      220
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Pro Thr Val Leu Thr Asn Met Thr Asn Leu Thr Ile Ser Ser His Ile
 225 230 235 240

Lys Thr Thr Ile Lys Asp Gln Asn Thr Val Glu Ile Glu Phe Asn Ile
 245 250 255

Gln Lys Ser Ser Val Glu Ser Leu Ile Glu Lys Leu Ala Ser Asn Ile
 260 265 270

Gln Thr

<210> 526

<211> 257

<212> PRT

<213> Homo sapiens

<400> 526

Cys Ala Ser Leu Pro Tyr Thr Pro Pro Lys Gln Asn Leu Asn Tyr Leu
 1 5 10 15

Met Glu Leu Leu Pro Gly Ala Asn Leu Tyr Ala His Val Asn Leu Ile
 20 25 30

Lys Asn Arg Ser Ile Tyr Asn Ser Leu Ser Pro Lys Tyr Lys Ser Val
 35 40 45

Leu Gly Leu Ile Ser Asn Leu Tyr Phe Ser Tyr Lys Lys Glu Asn Asn
 50 55 60

Asp Phe Ala Leu Leu Ile Met Gly Asn Phe Pro Lys Asp Ile Phe Trp
 65 70 75 80

Gly Ile His Lys Asn Arg Asn Thr Glu Ser Ile Gly Asn Ile Phe Thr
 85 90 95

Asn Pro Lys Trp Lys Leu Lys Asn Ser Asn Ile Tyr Ile Ile Pro Asn
 100 105 110

Lys Ala Arg Thr Ser Ile Ala Ile Thr Gln Lys Asp Ile Thr Ala Lys
 115 120 125

Asp Asn Asn Met Leu Thr Thr Lys Tyr Ile Gly Glu Ile Glu Lys Asn
 130 135 140

Glu Met Phe Phe Trp Ile Gln Asp Pro Thr Leu Leu Leu Pro Asn Gln
 145 150 155 160

Ile Val Ser Ser Lys Asn Leu Ile Pro Phe Ser Ser Gly Thr Leu Ser
 165 170 175

Ile Asn Ser Leu Asn Gln Glu Glu Tyr Ile Phe Lys Ser Leu Ile Lys
 180 185 190

Thr Asn Asn Pro Pro Ile Leu Lys Ile Leu Ser Lys Lys Leu Ile Pro
 195 200 205

Thr Val Leu Thr Asn Met Thr Asn Leu Thr Ile Ser Ser His Ile Lys
 210 215 220

Thr Thr Ile Lys Asp Gln Asn Thr Val Glu Ile Glu Phe Asn Ile Gln
 225 230 235 240

Lys Ser Ser Val Glu Ser Leu Ile Glu Lys Leu Ala Ser Asn Ile Gln
 245 250 255

Thr

<210> 527
 <211> 825
 <212> DNA
 <213> Homo sapiens

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 aattttatag cccatgtaaa tttaattaaa aacagggtcta tttataactc ttttagccct 180
 aaatataaat cagtctctgg gcttataagc aattttatact ttagctataa aaaagaaaat 240
 aacgattttg ctctactaat aatgggtaat ttcccaaaaag atatttttctg gggaattcat 300
 aaaaatagaa atacagaatc aataggcaat atattttacaa atccaaaatg gaaacttaaa 360
 aattcaaata tatacattat tccaaacaaa gctagaacta gcattgcaat aacccaaaaa 420
 gatataaccg caaaagacaa taatatgcta acaacaaaat atattgggga aatagaaaaa 480
 aatgaaatgt ttttttggat tcaagatcca acattattgc tcccaaacca aatagtaagc 540
 agcaaaaatt taattccctt tagcagtggg actttgtcta taaacagctt aaatcaagaa 600
 gaatatattt ttaaaccctt aatcaaaaaca aataatccac caatactaaa aatattgtca 660
 aaaaagttaa ttccaaccgt cttgacaaac atgacaaacc tcacaatatc aagccacata 720
 aagaccacaa taaaagacca aaatcagggt gaaatagaat ttaatatcca aaaatctagt 780
 gttgaaagcc ttatagaaaa actagcttca aatattcaaa cctaa 825

<210> 528
 <211> 774
 <212> DNA
 <213> Homo sapiens

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 cctggcgcaa attttatagc ccatgtaaat ttaattaaaa acagggtctat ttataactct 120
 ttaagcccta aatataaatc agttcttggg cttataagca attttatact tagctataaa 180
 aaagaaaata acgattttgc tctactaata atgggtaatt tcccaaaaaga tattttctgg 240
 ggaattcata aaaatagaaa tacagaatca ataggcaata tattttacaaa tccaaaatgg 300
 aaacttaaaa attcaaatat atacattatt ccaaacaaag ctagaactag cattgcaata 360
 acccaaaaag atataaccgc aaaagacaat aatatgctaa caacaaaata tattggggaa 420
 atagaaaaaa atgaaatggt tttttggatt caagatccaa cattattgct cccaaaccaa 480
 atagtaagca gcaaaaattt aattcccttt agcagtggaa ctttgtctat aaacagctta 540
 aatcaagaag aatatatttt taaatcctta atcaaaaaca ataattccacc aatactaaaa 600
 atattgtcaa aaaagttaat tccaaccgtc ttgacaaaca tgacaaacct cacaatatca 660
 agccacataa agaccacaat aaaagaccaa aatcagggtg aaatagaatt taatattcaa 720
 aaatctagt ttgaaagcct tatagaaaaa ctagcttcaa atattcaaac ctaa 774

<210> 529
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 529
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Asn Lys Asn Asn Lys Ile Pro Leu Ile Gln Lys Leu Asp Leu Pro Lys

20 25 30

Ser Ser Ile Leu Gly Phe Ser Asn Lys Met Gly Ile Ile Ile Lys Asp
35 40 45

Tyr Ala Phe Leu Ser Lys Ser Thr Lys Lys Asn Ser Glu Leu Asp Tyr
50 55 60

Asp Tyr Ala Ile Leu Leu Arg Lys Asp Glu Val Val Lys Ile Glu Lys
65 70 75 80

Thr Leu Glu Lys Thr Glu Arg Tyr Gly Ile Glu Gly Asn Trp Ile Leu
85 90 95

Val Asn Tyr Lys Gly Thr Lys Arg Tyr Ile Phe Ser Lys Asp Ile Asn
100 105 110

Ile Val Asn Asn Leu Ile Ile Asp His Ser Lys
115 120

<210> 530
<211> 108
<212> PRT
<213> Homo sapiens

<400> 530
Cys Asn Lys Asn Asn Lys Ile Pro Leu Ile Gln Lys Leu Asp Leu Pro
1 5 10 15

Lys Ser Ser Ile Leu Gly Phe Ser Asn Lys Met Gly Ile Ile Ile Lys
20 25 30

Asp Tyr Ala Phe Leu Ser Lys Ser Thr Lys Lys Asn Ser Glu Leu Asp
35 40 45

Tyr Asp Tyr Ala Ile Leu Leu Arg Lys Asp Glu Val Val Lys Ile Glu
50 55 60

Lys Thr Leu Glu Lys Thr Glu Arg Tyr Gly Ile Glu Gly Asn Trp Ile
65 70 75 80

Leu Val Asn Tyr Lys Gly Thr Lys Arg Tyr Ile Phe Ser Lys Asp Ile
85 90 95

Asn Ile Val Asn Asn Leu Ile Ile Asp His Ser Lys
100 105

<210> 531
<211> 372
<212> DNA
<213> Homo sapiens

<400> 531
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aaaattcctc tcattcaaaa attagatttg cccaaaagca gcattcttgg ctttagcaat 120
aaaatgggca taataataaa agattatgct tttcttagta aaagcactaa gaaaaatagc 180
gaattggatt atgattacgc aattctactc agaaaagacg aagtcgtaaa aattgaaaaa 240
acactagaaa aaacagagcg ctatggaatt gaaggaaatt ggatcctagt caattacaag 300
ggaactaaaa gatacatctt tagcaaagac atcaatatag tcaacaattt aataattgat 360
cattctaaat ag 372

<210> 532
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 532
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 cttggcttta gcaataaaaat gggcataata ataaaagatt atgcttttct tagtaaaagc 120
 actaagaaaa atagcgaatt ggattatgat tacgcaattc tactcagaaa agacgaagtc 180
 gtaaaaattg aaaaaacact agaaaaaaca gagcgctatg gaattgaagg aaattggatc 240
 ctagtcaatt acaagggaac taaaagatac atcttttagca aagacatcaa tatagtcaac 300
 aatttaataa ttgatcattc taaatag 327

<210> 533
 <211> 155
 <212> PRT
 <213> Homo sapiens

<400> 533
 Met Lys Lys Leu Ile Ile Ile Phe Thr Leu Phe Leu Ser Gln Ala Cys
 1 5 10 15
 Asn Leu Ser Thr Met His Lys Ile Asp Thr Lys Glu Asp Met Lys Ile
 20 25 30
 Leu Tyr Ser Glu Ile Ala Glu Leu Arg Lys Lys Leu Asn Leu Asn His
 35 40 45
 Leu Glu Ile Asp Asp Thr Leu Glu Lys Val Ala Lys Glu Tyr Ala Ile
 50 55 60
 Lys Leu Gly Glu Asn Arg Thr Ile Thr His Thr Leu Phe Gly Thr Thr
 65 70 75 80
 Pro Met Gln Arg Ile His Lys Tyr Asp Gln Ser Phe Asn Leu Thr Arg
 85 90 95
 Glu Ile Leu Ala Ser Gly Ile Glu Leu Asn Arg Val Val Asn Ala Trp
 100 105 110
 Leu Asn Ser Pro Ser His Lys Glu Ala Leu Ile Asn Thr Asp Thr Asp
 115 120 125
 Lys Ile Gly Gly Tyr Arg Leu Lys Thr Thr Asp Asn Ile Asp Ile Phe
 130 135 140
 Val Val Leu Phe Gly Lys Arg Lys Tyr Lys Asn
 145 150 155

<210> 534
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 534
 Cys Asn Leu Ser Thr Met His Lys Ile Asp Thr Lys Glu Asp Met Lys
 1 5 10 15
 Ile Leu Tyr Ser Glu Ile Ala Glu Leu Arg Lys Lys Leu Asn Leu Asn

20	25	30
His Leu Glu Ile Asp Asp Thr Leu Glu Lys Val Ala Lys Glu Tyr Ala		
35	40	45
Ile Lys Leu Gly Glu Asn Arg Thr Ile Thr His Thr Leu Phe Gly Thr		
50	55	60
Thr Pro Met Gln Arg Ile His Lys Tyr Asp Gln Ser Phe Asn Leu Thr		
65	70	75
Arg Glu Ile Leu Ala Ser Gly Ile Glu Leu Asn Arg Val Val Asn Ala		
85	90	95
Trp Leu Asn Ser Pro Ser His Lys Glu Ala Leu Ile Asn Thr Asp Thr		
100	105	110
Asp Lys Ile Gly Gly Tyr Arg Leu Lys Thr Thr Asp Asn Ile Asp Ile		
115	120	125
Phe Val Val Leu Phe Gly Lys Arg Lys Tyr Lys Asn		
130	135	140

<210> 535
 <211> 468
 <212> DNA
 <213> Homo sapiens

<400> 535
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 agaaaaaat taaatctaaa ccatctagaa atagatgata cccttgaaaa agttgcaaaa 180
 gaatatgcca ttaaactggg agaaaataga acaataactc acaccctttt tggcacaacc 240
 ccaatgcaaa gaatacataa atacgatcaa tcctttaatt taacaagaga aatactggca 300
 tcaggaattg aacttaacag agtagttaat gcatggctta atagtccaag ccacaaagaa 360
 gctcttatta atacagatac cgataaaaata ggtggctata gattaaaaac gactgacaat 420
 atagatatat ttgtagttct ttttggaata agaaaatata agaattga 468

<210> 536
 <211> 423
 <212> DNA
 <213> Homo sapiens

<400> 536
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 gaaaaagttg caaaagaata tgccattaaa ctgggagaaa atagaacaat aactcacacc 180
 ctttttggca caaccctaat gcaaagaata cataaatacg atcaatcctt taatttaaca 240
 agagaaatac tggcatcagg aattgaactt aacagagtag ttaatgcatg gcttaatagt 300
 ccaagccaca aagaagctct tattaatata gataccgata aaataggtgg ctatagatta 360
 aaaacgactg acaatataga tatatttgta gttctttttg gaaaaagaaa atataagaat 420
 tga 423

<210> 537
 <211> 157
 <212> PRT
 <213> Homo sapiens

<400> 537
 Met Ile Arg Val Leu Leu Gly Ser Leu Ala Val Ser Phe Leu Phe Ser

1 5 10 15
 Ile Cys Met Val Phe Leu Asn Tyr Asp Asn Leu Phe Ser Lys Lys Val
 20 25 30
 Phe Tyr Phe His Ser Ser Lys Gly Phe Val Ala Asn Leu Arg Tyr Leu
 35 40 45
 Arg Asp Glu Gln Asn Leu Lys Asp Asn Leu Asp Leu Leu Val Lys Asp
 50 55 60
 Phe Leu Leu Gly Ser Asn Glu Gly Phe Ser Phe Gly Phe Leu Leu Ser
 65 70 75 80
 Asp Ser Arg Phe Leu Tyr Ser Phe Leu Lys Asn Gly Val Tyr Tyr Val
 85 90 95
 Asn Leu Ser Arg Glu Phe Tyr Asp Ser Phe Asn Asn Gly Asp Tyr Asn
 100 105 110
 Glu Ser Asn Glu Ser Phe Asp Val Lys Val Asn Leu Phe Ala Met Ser
 115 120 125
 Leu Ile Lys Thr Met Arg Phe Asn Tyr Pro Gly Lys Ile Lys Lys Ile
 130 135 140
 Val Ile Leu Val Glu Gly Cys Ile Leu Lys Glu Gln Ser
 145 150 155

<210> 538
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 538
 Cys Met Val Phe Leu Asn Tyr Asp Asn Leu Phe Ser Lys Lys Val Phe
 1 5 10 15
 Tyr Phe His Ser Ser Lys Gly Phe Val Ala Asn Leu Arg Tyr Leu Arg
 20 25 30
 Asp Glu Gln Asn Leu Lys Asp Asn Leu Asp Leu Leu Val Lys Asp Phe
 35 40 45
 Leu Leu Gly Ser Asn Glu Gly Phe Ser Phe Gly Phe Leu Leu Ser Asp
 50 55 60
 Ser Arg Phe Leu Tyr Ser Phe Leu Lys Asn Gly Val Tyr Tyr Val Asn
 65 70 75 80
 Leu Ser Arg Glu Phe Tyr Asp Ser Phe Asn Asn Gly Asp Tyr Asn Glu
 85 90 95
 Ser Asn Glu Ser Phe Asp Val Lys Val Asn Leu Phe Ala Met Ser Leu
 100 105 110
 Ile Lys Thr Met Arg Phe Asn Tyr Pro Gly Lys Ile Lys Lys Ile Val
 115 120 125
 Ile Leu Val Glu Gly Cys Ile Leu Lys Glu Gln Ser

130

135

140

<210> 539
 <211> 474
 <212> DNA
 <213> Homo sapiens

<400> 539
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 tttttaaatt atgataatct tttttcaaaa aagggttttt attttcattc tagcaaggga 120
 tttgttgcta atttaagata ttttaagagat gaacaaaatt tgaaagataa tttagatctt 180
 ttagtaaaaag attttctttt aggaagcaat gaagggtttt cttttgggtt tttattaagt 240
 gattcaagat ttttatattc ttttttaaag aatggagttt attatgtaa tctttcaaga 300
 gaattttatg attcttttaa taatggtgat tataatgaat ctaatgaatc ttttgatgtt 360
 aagggtcaatc tttttgctat gtctttaata aaaacaatgc gctttaacta tcctggtaag 420
 ataaaaaaga ttgttattct tgttgaaggg tgtatcttaa aggagcaaag ttga 474

<210> 540
 <211> 423
 <212> DNA
 <213> Homo sapiens

<400> 540
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 agcaagggat ttgttgctaa ttttaagatat ttaagagatg aacaaaattt gaaagataat 120
 ttagatcttt tagtaaaaaga ttttctttta ggaagcaatg aagggttttc ttttgggtt 180
 ttattaagtg attcaagatt tttatattct tttttaaaga atggagttaa ttatgtaaat 240
 ctttcaagag aattttatga ttcttttaat aatggtgatt ataatgaatc taatgaatct 300
 tttgatgtta aggtcaatct ttttgctatg tctttaataa aaacaatgcg ctttaactat 360
 cctggtaaga taaaaaagat tgttattctt gttgaagggt gtatcttaaa ggagcaaagt 420
 tga 423

<210> 541
 <211> 168
 <212> PRT
 <213> Homo sapiens

<400> 541
 Met Ala Ile Lys Tyr Ala Arg Glu Asn Asn Ile Pro Phe Leu Gly Ile
 1 5 10 15
 Cys Leu Gly Leu Gln Leu Ala Val Ile Glu Phe Ala Arg Asn Val Cys
 20 25 30
 Gly Ile Leu Asp Ala Asp Thr Glu Glu Asn Leu Ala Arg Asp Lys Pro
 35 40 45
 Leu Lys Ser Pro Val Ile His Leu Leu Pro Glu Gln Lys Gly Ile Lys
 50 55 60
 Asp Lys Gly Ala Thr Met Arg Leu Gly Gly Tyr Pro Val Ile Leu Lys
 65 70 75 80
 Lys Asn Thr Ile Ala Phe Lys Leu Tyr Gly Gln Asp Arg Ile Ile Glu
 85 90 95
 Arg Phe Arg His Arg Tyr Glu Val Asn Asn Asp Tyr Ile Asp Leu Phe
 100 105 110
 Ala Lys Asn Gly Leu Ile Val Ser Gly Phe Ser Ser Asp Phe Lys Met

400

115 120 125

Ala Lys Leu Ile Glu Ile Pro Glu Asn Lys Phe Phe Val Ala Cys Gln
 130 135 140

Phe His Pro Glu Leu Ile Thr Arg Ile Glu Asn Pro Ala Lys Leu Phe
 145 150 155 160

Leu Gly Leu Ile Lys Ala Cys Ile
 165

<210> 542
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 542

Cys Leu Gly Leu Gln Leu Ala Val Ile Glu Phe Ala Arg Asn Val Cys
 1 5 10 15

Gly Ile Leu Asp Ala Asp Thr Glu Glu Asn Leu Ala Arg Asp Lys Pro
 20 25 30

Leu Lys Ser Pro Val Ile His Leu Leu Pro Glu Gln Lys Gly Ile Lys
 35 40 45

Asp Lys Gly Ala Thr Met Arg Leu Gly Gly Tyr Pro Val Ile Leu Lys
 50 55 60

Lys Asn Thr Ile Ala Phe Lys Leu Tyr Gly Gln Asp Arg Ile Ile Glu
 65 70 75 80

Arg Phe Arg His Arg Tyr Glu Val Asn Asn Asp Tyr Ile Asp Leu Phe
 85 90 95

Ala Lys Asn Gly Leu Ile Val Ser Gly Phe Ser Ser Asp Phe Lys Met
 100 105 110

Ala Lys Leu Ile Glu Ile Pro Glu Asn Lys Phe Phe Val Ala Cys Gln
 115 120 125

Phe His Pro Glu Leu Ile Thr Arg Ile Glu Asn Pro Ala Lys Leu Phe
 130 135 140

Leu Gly Leu Ile Lys Ala Cys Ile
 145 150

<210> 543
 <211> 507
 <212> DNA
 <213> Homo sapiens

<400> 543

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 gaaaatttag caagagacaa gcccttaaaa agtctgttta tccatttact tcctgagcaa 180
 aagggaatta aagataaggg cgctacaatg aggcttggtg gatatacctgt gattcttaaa 240
 aagaatacaa tagcttttaa actttatggc caagatcgga taattgaaag atttagacat 300
 aggtatgaag tcaataatga ttatatagat ttatttgcaa aaaatgggct tatagtatct 360
 ggattttcaa gtgattttta aatggcaaaa ttaatagaaa ttcttgaaaa taaatttttc 420

gtagcttgcc agtttcatcc agaacttatt acaagaatag aaaatccagc caagcttttt 480
ctaggattaa ttaaagcttg tatttga 507

<210> 544
<211> 459
<212> DNA
<213> Homo sapiens

<400> 544
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cttcctgagc aaaaggggaat taaagataag ggcgctacaa tgaggcttgg tggatattcct 180
gtgattctta aaaagaatac aatagctttt aaactttatg gccaaagatcg gataattgaa 240
agatttagac ataggtatga agtcaataat gattatatag atttatttgc aaaaaatggg 300
cttatagtat ctggattttc aagtgatttt aaaatggcaa aattaataga aattcctgaa 360
aataaatttt tcgtagcttg ccagtttcat ccagaactta ttacaagaat agaaaaatcca 420
gccaaagcttt ttctaggatt aattaaagct tgtatttga 459

<210> 545
<211> 497
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (198)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 545
Met Asn Lys Thr Lys Asn Arg Ser Leu Thr Tyr Phe Ile Ile Leu Ser
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Cys Ile Ser Leu Phe Gly Ala Asn Asn Asn Thr Ile Ser Tyr Ser Ser
20 25 30
Ile Glu Ile Pro Leu Glu Asp Leu Ser Glu Glu Phe Lys Ser Ser Gly
35 40 45
Asn Lys Ser Asp Gln Ile Asn Thr Ser Lys His Leu Asn Lys Asn Ile
50 55 60
Val Ser Tyr Glu Asp Pro Lys Lys Gly Lys Asp Leu Lys Leu Pro Glu
65 70 75 80
Asn Ile Arg Asp Lys Lys Leu Pro Gln Lys Arg Met Asp Glu Asn Asp
85 90 95
Leu Lys Ser Val Ile Glu Asn Tyr Glu Asn Lys Ile Lys Asn Ile Glu
100 105 110
Lys Leu Leu Lys Thr Lys Asn Gln Lys Thr Ser Glu Asn Glu Asn Lys
115 120 125
Lys Ile Glu Ser Ile Glu Lys Lys Ala Lys Lys Tyr Glu Ile Leu Thr
130 135 140
Asn Lys Leu Lys Asn Glu Ile Val Glu Ile Lys Lys Leu Leu Asn Lys
145 150 155 160
Lys Ile Lys Pro Lys Glu Asp Glu Asn Tyr Glu Lys Ile Asn Ile Glu

165 170 175

Asn Ile Glu Glu Glu Thr Asp Asp Asp Phe Glu Asp Asn Tyr Glu Tyr
 180 185 190

Asn Asp Glu Ile Glu Xaa Thr Asn Glu Asp Asn Tyr Pro Ser Asn Glu
 195 200 205

Gly Ile Ile Asn Asn Leu Lys Glu Asn Leu Asn Glu Asn Glu Lys Tyr
 210 215 220

Tyr Ala Ile Asn Glu Lys Lys Ile Asp Glu Leu Glu Asp Arg Ile Asn
225 230 235 240

Glu Asn Glu Asn Thr Ile Leu Asp Leu Gln Arg Glu Leu Arg Asn Phe
 245 250 255

Lys Lys Lys Asp Asn Ser Asp Lys Asn Leu Glu Glu Ile Glu Glu Asn
 260 265 270

Leu Ser Ser Ile Gly Arg Ile Ile Asn Asp Leu Lys Arg Lys Ile Ser
 275 280 285

Ala Asn Glu Ala Ile Asn Lys Glu Asn Gln Lys Lys Ile Arg Thr Asp
 290 295 300

Lys His Lys Leu Lys Glu Leu Glu Asp Lys Ile Lys Glu Asn Glu Glu
305 310 315 320

Thr Ile Leu Lys Leu Gln Lys Glu Leu Asn Asn Phe Lys Lys Lys Glu
 325 330 335

Ile Tyr Gln Lys Pro Leu Asn Glu Glu Thr Phe Thr Pro Ser Ile Thr
 340 345 350

Ser Lys Asn Asp Asp Leu Glu Glu Asn Lys Lys Leu Lys Lys Glu Tyr
 355 360 365

Leu Lys Pro Ile Glu Lys Lys Glu Ser Arg Asp Leu Glu Glu Asn Thr
 370 375 380

Lys Ser Thr Pro Lys Thr Thr Met Ile Lys Thr Ala Asp Phe Gln Ile
385 390 395 400

Tyr Pro Asp Ile Tyr Leu Asn Asn Tyr Lys Phe Lys Glu Lys Gly Asp
 405 410 415

Gln Phe Ala Phe Lys Lys Glu Asn Thr Tyr Tyr Ile Glu Ile Asp Pro
 420 425 430

Thr Asn Asn Leu Asn Glu Ala Leu Lys Asn His Glu Ile Ile Ser Lys
 435 440 445

Tyr Lys Phe Glu Lys Tyr Phe Ile Asn Pro Ile Leu Lys Asn Lys Glu
 450 455 460

Glu Phe Phe Arg Asn Leu Ile Glu Val Lys Asn Ile His Glu Leu Gly
465 470 475 480

Ile Met Tyr Lys Asn Leu Lys Pro Glu Phe Lys Gln Ile Lys Ile Ile

403

Lys

<210> 546
 <211> 481
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (182)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 546
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 Asn Lys Ser Asp Gln Ile Asn Thr Ser Lys His Leu Asn Lys Asn Ile
 35 40 45
 Val Ser Tyr Glu Asp Pro Lys Lys Gly Lys Asp Leu Lys Leu Pro Glu
 50 55 60
 Asn Ile Arg Asp Lys Lys Leu Pro Gln Lys Arg Met Asp Glu Asn Asp
 65 70 75 80
 Leu Lys Ser Val Ile Glu Asn Tyr Glu Asn Lys Ile Lys Asn Ile Glu
 85 90 95
 Lys Leu Leu Lys Thr Lys Asn Gln Lys Thr Ser Glu Asn Glu Asn Lys
 100 105 110
 Lys Ile Glu Ser Ile Glu Lys Lys Ala Lys Lys Tyr Glu Ile Leu Thr
 115 120 125
 Asn Lys Leu Lys Asn Glu Ile Val Glu Ile Lys Lys Leu Leu Asn Lys
 130 135 140
 Lys Ile Lys Pro Lys Glu Asp Glu Asn Tyr Glu Lys Ile Asn Ile Glu
 145 150 155 160
 Asn Ile Glu Glu Glu Thr Asp Asp Asp Phe Glu Asp Asn Tyr Glu Tyr
 165 170 175
 Asn Asp Glu Ile Glu Xaa Thr Asn Glu Asp Asn Tyr Pro Ser Asn Glu
 180 185 190
 Gly Ile Ile Asn Asn Leu Lys Glu Asn Leu Asn Glu Asn Glu Lys Tyr
 195 200 205
 Tyr Ala Ile Asn Glu Lys Lys Ile Asp Glu Leu Glu Asp Arg Ile Asn
 210 215 220
 Glu Asn Glu Asn Thr Ile Leu Asp Leu Gln Arg Glu Leu Arg Asn Phe
 225 230 235 240

Lys Lys Lys Asp Asn Ser Asp Lys Asn Leu Glu Glu Ile Glu Glu Asn
 245 250 255
 Leu Ser Ser Ile Gly Arg Ile Ile Asn Asp Leu Lys Arg Lys Ile Ser
 260 265 270
 Ala Asn Glu Ala Ile Asn Lys Glu Asn Gln Lys Lys Ile Arg Thr Asp
 275 280 285
 Lys His Lys Leu Lys Glu Leu Glu Asp Lys Ile Lys Glu Asn Glu Glu
 290 295 300
 Thr Ile Leu Lys Leu Gln Lys Glu Leu Asn Asn Phe Lys Lys Lys Glu
 305 310 315 320
 Ile Tyr Gln Lys Pro Leu Asn Glu Glu Thr Phe Thr Pro Ser Ile Thr
 325 330 335
 Ser Lys Asn Asp Asp Leu Glu Glu Asn Lys Lys Leu Lys Lys Glu Tyr
 340 345 350
 Leu Lys Pro Ile Glu Lys Lys Glu Ser Arg Asp Leu Glu Glu Asn Thr
 355 360 365
 Lys Ser Thr Pro Lys Thr Thr Met Ile Lys Thr Ala Asp Phe Gln Ile
 370 375 380
 Tyr Pro Asp Ile Tyr Leu Asn Asn Tyr Lys Phe Lys Glu Lys Gly Asp
 385 390 395 400
 Gln Phe Ala Phe Lys Lys Glu Asn Thr Tyr Tyr Ile Glu Ile Asp Pro
 405 410 415
 Thr Asn Asn Leu Asn Glu Ala Leu Lys Asn His Glu Ile Ile Ser Lys
 420 425 430
 Tyr Lys Phe Glu Lys Tyr Phe Ile Asn Pro Ile Leu Lys Asn Lys Glu
 435 440 445
 Glu Phe Phe Arg Asn Leu Ile Glu Val Lys Asn Ile His Glu Leu Gly
 450 455 460
 Ile Met Tyr Lys Asn Leu Lys Pro Glu Phe Lys Gln Ile Lys Ile Ile
 465 470 475 480
 Lys

<210> 547
 <211> 1493
 <212> DNA
 <213> Homo sapiens

<400> 547
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 agtgaagaat ttaaaaagttc tgggaataaaa agcgatcaaa taaatacctc aaaacattta 180
 aacaaaaaca tagtttctta tgaagaccca aaaaagggtta aagatctaaa attgccagaa 240
 aatataagag acaaaaaaact accccaaaaa agaatggacg aaaatgatct aaaatctgta 300

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aaaacatcgg	aaaatgaaaa	taaaaaaaata	gaatcaatcg	aaaaaaaagc	aaaaaaatat	420
gaaattttta	ccaataaatt	aaaaaacgaa	atagtagaaa	taaaaaagct	ccttaacaaa	480
aaaatcaagc	ctaaagaaga	tgaaaattac	gaaaaaataa	atattgaaaa	cattgaagaa	540
gaaactgatg	atgattttga	agacaattat	gaatataatg	atgaaattga	agaacaaatg	600
aggacaatta	cccttcta	gaaggaataa	taaacaatct	aaaagaaaat	cttaatgaaa	660
acgaaaaata	ttatgctatt	aatgaaaaaa	aatcgatga	acttgaagac	agaatcaacg	720
agaatgaaaa	cactatttta	gacttgcaaa	gagaattaag	gaatttttaa	aaaaaagata	780
actcagataa	aaacttagaa	gaaattgagg	aaaattttatc	ttcaatagga	agaataatta	840
atgatctaaa	aagaaaaatc	agcgcaaatg	aagcaataaa	caaagaaaat	caaaaaaaaa	900
taagaactga	taaacacaaa	ctcaaagaat	tagaagataa	aataaaggaa	aatgaagaga	960
ctatttttaa	acttcaaaaa	gaattaaaca	atttttaaaaa	aaaagaaatt	tatcaaaaaac	1020
ccttaaatga	agaaactttc	actccaagca	ttacaagtaa	aaatgacgac	ttagaagaaa	1080
ataagaaatt	aaaaaaggaa	tattttaaagc	ccatagaaaa	aaaagaaagc	cgagatctag	1140
aagaaaatac	taaaagcacc	ccaaaaacaa	ctatgataaa	aacagcagat	tttcaaactc	1200
accctgacat	atatcttaat	aattataaat	ttaaagaaaa	gggagatcaa	tttgcaattta	1260
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aaaatcatga	aataatctca	aaatataaat	ttgaaaaata	tttcattaac	cctattctaa	1380
aaaataaaga	agaatttttt	agaaacttaa	tagaagtcaa	aaatatccac	gaactaggaa	1440
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<210> 548

<211> 1445

<212> DNA

<213> Homo sapiens

<400> 548

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tcaaaacatt	taaacaaaaa	catagtttct	tatgaagacc	caaaaaaggg	taaagatcta	180
aaattgccag	aaaatataag	agacaaaaaa	ctaccccaaa	aaagaatgga	cgaaaatgat	240
ctaaaatctg	taattgaaaa	ttatgaaaat	aaaatttaaaa	acatagaaaa	gcttttataa	300
accaaaaatc	aaaaaacatc	ggaaaatgaa	aataaaaaaa	tagaatcaat	cgaaaaaaaa	360
gcaaaaaaat	atgaaatttt	aaccaataaa	ttaaaaaacg	aaatagtaga	aataaaaaag	420
ctccttaaca	aaaaaatcaa	gcctaaagaa	gatgaaaatt	acgaaaaaat	aaatattgaa	480
aacattgaag	aagaaactga	tgatgatttt	gaagacaatt	atgaatataa	tgatgaaatt	540
gaagaacaaa	tgaggacaat	tacccttcta	atgaaggaat	aataaacaat	ctaaaagaaa	600
atcttaatga	aaacgaaaaa	tattatgcta	ttaatgaaaa	aaaaatcgat	gaacttgaag	660
acagaatcaa	cgagaatgaa	aacactatct	tagacttgca	aagagaatta	aggaatttta	720
aaaaaaaaga	taactcagat	aaaaacttag	aagaaattga	ggaaaattta	tcttcaatag	780
gaagaataat	taatgatcta	aaaagaaaaa	tcagcgcaaa	tgaagcaata	aacaaagaaa	840
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tttatcaaaa	acccttaaat	gaagaaactt	tcactccaag	cattacaagt	aaaaatgacg	1020
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gccgagatct	agaagaaaaat	actaaaagca	ccccaaaaac	aactatgata	aaaacagcag	1140
attttcaaat	ctaccctgac	atatatctta	ataattataa	atttaaagaa	aaggagatc	1200
aatttgcatt	taaaaaagaa	aacacatact	atattgaaat	agatcccact	aacaatttaa	1260
atgaggcttt	aaaaaatcat	gaaataatct	caaaatataa	atttgaaaaa	tatttcatta	1320
accctattct	aaaaaataaa	gaagaatttt	ttagaacttt	aatagaagtc	aaaaatatcc	1380
acgaactagg	aattatgtat	aaaaatctaa	agcctgaatt	taagcaataa	aaaataatta	1440
aataa						1445

<210> 549

<211> 575

<212> PRT

<213> Homo sapiens

<400> 549

Met Asn Thr Lys Gly Lys Val Val Gly Val Asn Gly Asn Leu Val Thr

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Thr Ala Gly Arg Asn Leu Lys Ala Glu Val Ile Arg Ile Arg Gly Asn	35	40	45
Glu Val Asp Ala Gln Val Phe Glu Leu Thr Lys Gly Ile Ser Val Gly	50	55	60
Asp Leu Val Glu Phe Thr Asp Lys Leu Leu Thr Val Glu Leu Gly Pro	65	70	75
Gly Leu Leu Thr Gln Val Tyr Asp Gly Leu Gln Asn Pro Leu Pro Glu	85	90	95
Leu Ala Ile Gln Cys Gly Phe Phe Leu Glu Arg Gly Val Tyr Leu Arg	100	105	110
Pro Leu Asn Lys Asp Lys Lys Trp Asn Phe Lys Lys Thr Ser Lys Val	115	120	125
Gly Asp Ile Val Ile Ala Gly Asp Phe Leu Gly Phe Val Ile Glu Gly	130	135	140
Thr Val His His Gln Ile Met Ile Pro Phe Tyr Lys Arg Asp Ser Tyr	145	150	155
Lys Ile Val Glu Ile Val Ser Asp Gly Asp Tyr Ser Ile Asp Glu Gln	165	170	175
Ile Ala Val Ile Glu Asp Asp Ser Gly Met Arg His Asn Ile Thr Met	180	185	190
Ser Phe His Trp Pro Val Lys Val Pro Ile Thr Asn Tyr Lys Glu Arg	195	200	205
Leu Ile Pro Ser Glu Pro Met Leu Thr Gln Thr Arg Ile Ile Asp Thr	210	215	220
Phe Phe Pro Val Ala Lys Gly Gly Thr Phe Cys Ile Pro Gly Pro Phe	225	230	235
Gly Ala Gly Lys Thr Val Leu Gln Gln Val Thr Ser Arg Asn Ala Asp	245	250	255
Val Asp Val Val Ile Ile Ala Ala Cys Gly Glu Arg Ala Gly Glu Val	260	265	270
Val Glu Thr Leu Lys Glu Phe Pro Glu Leu Met Asp Pro Lys Thr Gly	275	280	285
Lys Ser Leu Met Asp Arg Thr Cys Ile Ile Cys Asn Thr Ser Ser Met	290	295	300
Pro Val Ala Ala Arg Glu Ala Ser Val Tyr Thr Ala Ile Thr Ile Gly	305	310	315
Glu Tyr Tyr Arg Gln Met Gly Leu Asp Ile Leu Leu Leu Ala Asp Ser			

325 330 335

Thr Ser Arg Trp Ala Gln Ala Met Arg Glu Met Ser Gly Arg Leu Glu
340 345 350

Glu Ile Pro Gly Glu Glu Ala Phe Pro Ala Tyr Leu Glu Ser Val Ile
355 360 365

Ala Ser Phe Tyr Glu Arg Ala Gly Ile Val Val Leu Asn Asn Gly Asp
370 375 380

Ile Gly Ser Val Thr Val Gly Gly Ser Val Ser Pro Ala Gly Gly Asn
385 390 395 400

Phe Glu Glu Pro Val Thr Gln Ala Thr Leu Lys Val Val Gly Ala Phe
405 410 415

His Gly Leu Thr Arg Glu Arg Ser Asp Ala Arg Lys Phe Pro Ala Ile
420 425 430

Ser Pro Leu Glu Ser Trp Ser Lys Tyr Lys Gly Val Ile Asp Gln Lys
435 440 445

Lys Thr Glu Tyr Ala Arg Ser Phe Leu Val Lys Gly Asn Glu Ile Asn
450 455 460

Gln Met Met Lys Val Val Gly Glu Glu Gly Ile Ser Asn Asp Asp Phe
465 470 475 480

Leu Ile Tyr Leu Lys Ser Glu Leu Leu Asp Ser Cys Tyr Leu Gln Gln
485 490 495

Asn Ser Phe Asp Ser Ile Asp Ala Ala Val Ser Ser Glu Arg Gln Asn
500 505 510

Tyr Met Phe Asp Ile Val Tyr Asn Ile Leu Lys Thr Asn Phe Glu Phe
515 520 525

Ser Asp Lys Leu Gln Ala Arg Asp Phe Ile Asn Glu Leu Arg Gln Asn
530 535 540

Leu Leu Asp Met Asn Leu Ser Ser Phe Lys Asp His Lys Phe Asn Lys
545 550 555 560

Leu Glu His Ala Leu Gly Glu Leu Ile Asn Phe Lys Lys Val Ile
565 570 575

<210> 550
<211> 541
<212> PRT
<213> Homo sapiens

<400> 550
Gly Arg Asn Leu Lys Ala Glu Val Ile Arg Ile Arg Gly Asn Glu Val
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Asp Ala Gln Val Phe Glu Leu Thr Lys Gly Ile Ser Val Gly Asp Leu
20 25 30
Val Glu Phe Thr Asp Lys Leu Leu Thr Val Glu Leu Gly Pro Gly Leu

408

35	40	45
Leu Thr Gln Val Tyr Asp Gly	Leu Gln Asn Pro Leu	Pro Glu Leu Ala
50	55	60
Ile Gln Cys Gly Phe Phe	Leu Glu Arg Gly Val Tyr	Leu Arg Pro Leu
65	70	75
Asn Lys Asp Lys Lys Trp	Asn Phe Lys Lys Thr Ser	Lys Val Gly Asp
85	90	95
Ile Val Ile Ala Gly Asp	Phe Leu Gly Phe Val Ile	Glu Gly Thr Val
100	105	110
His His Gln Ile Met Ile	Pro Phe Tyr Lys Arg Asp	Ser Tyr Lys Ile
115	120	125
Val Glu Ile Val Ser Asp	Gly Asp Tyr Ser Ile Asp	Glu Gln Ile Ala
130	135	140
Val Ile Glu Asp Asp Ser	Gly Met Arg His Asn Ile	Thr Met Ser Phe
145	150	155
His Trp Pro Val Lys Val	Pro Ile Thr Asn Tyr Lys	Glu Arg Leu Ile
165	170	175
Pro Ser Glu Pro Met Leu	Thr Gln Thr Arg Ile Ile	Asp Thr Phe Phe
180	185	190
Pro Val Ala Lys Gly Gly	Thr Phe Cys Ile Pro Gly	Pro Phe Gly Ala
195	200	205
Gly Lys Thr Val Leu Gln	Gln Val Thr Ser Arg Asn	Ala Asp Val Asp
210	215	220
Val Val Ile Ile Ala Ala	Cys Gly Glu Arg Ala Gly	Glu Val Val Glu
225	230	235
Thr Leu Lys Glu Phe Pro	Glu Leu Met Asp Pro Lys	Thr Gly Lys Ser
245	250	255
Leu Met Asp Arg Thr Cys	Ile Ile Cys Asn Thr Ser	Ser Met Pro Val
260	265	270
Ala Ala Arg Glu Ala Ser	Val Tyr Thr Ala Ile Thr	Ile Gly Glu Tyr
275	280	285
Tyr Arg Gln Met Gly Leu	Asp Ile Leu Leu Leu Ala	Asp Ser Thr Ser
290	295	300
Arg Trp Ala Gln Ala Met	Arg Glu Met Ser Gly Arg	Leu Glu Glu Ile
305	310	315
Pro Gly Glu Glu Ala Phe	Pro Ala Tyr Leu Glu Ser	Val Ile Ala Ser
325	330	335
Phe Tyr Glu Arg Ala Gly	Ile Val Val Leu Asn Asn	Gly Asp Ile Gly
340	345	350
Ser Val Thr Val Gly Gly	Ser Val Ser Pro Ala Gly	Gly Asn Phe Glu

355

360

365

Glu Pro Val Thr Gln Ala Thr Leu Lys Val Val Gly Ala Phe His Gly
370 375 380

Leu Thr Arg Glu Arg Ser Asp Ala Arg Lys Phe Pro Ala Ile Ser Pro
385 390 395 400

Leu Glu Ser Trp Ser Lys Tyr Lys Gly Val Ile Asp Gln Lys Lys Thr
405 410 415

Glu Tyr Ala Arg Ser Phe Leu Val Lys Gly Asn Glu Ile Asn Gln Met
420 425 430

Met Lys Val Val Gly Glu Glu Gly Ile Ser Asn Asp Asp Phe Leu Ile
435 440 445

Tyr Leu Lys Ser Glu Leu Leu Asp Ser Cys Tyr Leu Gln Gln Asn Ser
450 455 460

Phe Asp Ser Ile Asp Ala Ala Val Ser Ser Glu Arg Gln Asn Tyr Met
465 470 475 480

Phe Asp Ile Val Tyr Asn Ile Leu Lys Thr Asn Phe Glu Phe Ser Asp
485 490 495

Lys Leu Gln Ala Arg Asp Phe Ile Asn Glu Leu Arg Gln Asn Leu Leu
500 505 510

Asp Met Asn Leu Ser Ser Phe Lys Asp His Lys Phe Asn Lys Leu Glu
515 520 525

His Ala Leu Gly Glu Leu Ile Asn Phe Lys Lys Val Ile
530 535 540

<210> 551

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 551

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gaagtaattc gtattagggg caatgaagtt gatgcacagg tttttgaatt gacaaaaggg 180
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gtaattgagg gaactgttca ccatcaaata atgattccat tttataaaag ggattcttat 480
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gaagatgatt ctggtatgag gcataatatt acaatgtctt ttcattggcc tgttaaagtt 600
cctattacta attataagga acgccttatt cctagtgaac ctatgttgac tcaaactaga 660
attatagata catttttccc agttgccaaa ggtggaactt tttgcattcc gggtcctttt 720
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gctcaagcaa tgagagaaat gtctggacgc cttgaggaaa ttcttggcga ggaggctttt 1080
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ttaaggcaaa atcttttaga catgaatctt tcttctttta aggatcataa gtttaataaa 1680
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<210> 552

<211> 1626

<212> DNA

<213> Homo sapiens

<400> 552

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acagttgaac tcggaccagg gcttttaact caagtatatg atgggcttca aaatcctttg 180
cctgaattgg ctattcaatg tggatttttt ttagaaaggg gagtatattt aaggcccttg 240
aataaagata aaaagtggaa ttttaaaaaa acctccaaag ttggagatat cgttattgca 300
ggagattttt taggttttgt aattgagggg actgttcacc atcaaataat gattccattt 360
tataaaaggg attcttataa aattgtggag attgtaagt atggcgacta ttcgattgat 420
gagcaaattg ctgtaattga agatgattct ggtatgaggc ataattattc aatgtccttt 480
cattggcctg ttaaagttcc tattactaat tataaggaaac gccttattcc tagtgaacct 540
atgttgactc aaactagaat tatagataca tttttccag ttgccaaagg tggaaacttt 600
tgcattccgg gtccttttgg agcaggaaaa acggttcttc agcagggttac aagtcgaaat 660
gctgatgttg atgtagtgat tattgcagct tgtggtgagc gagcaggaga agtggtagaa 720
actcttaaag aatttcccga attaatggat ccaaaaaccg gcaaactctt aatggacagg 780
acttgatta tttgtaatac atcttcaatg ccagttgcag ctagagaagc ttctgtttat 840
actgctatta ctattggtga gtattacagg caaatgggcc ttgatattct tcttttggca 900
gattcaactt caagatgggc tcaagcaatg agagaaatgt ctggacgcct tgaggaaatt 960
cctggcgagg aggcctttcc ggcatactct gactctgtta ttgcttcctt ttatgaaagg 1020
gcaggtattg tagttcttaa taatggggat attggatctg taacagttgg tggctctgta 1080
agtcctgctg gtggttaatt tgaagagcca gttactcaag caactttaaa agttgttaga 1140
gcatttcacg ggcttacaag agaaagggtc gatgctagga aatttccagc tattagtcct 1200
cttgaatctt ggagtaaata taaaggcggt attgatcaaa aaaagactga atatgcaaga 1260
tcttttttgg tgaaaggtaa tgaaattaat caaatgatga aagttgttgg agaagaaggc 1320
ataagtaacg atgatttttt aatttattta aaatccgagc tacttgattc gtgctatttg 1380
cagcaaaatt catttgattc tattgatgct gctgttagtt cagagcgtca aaattatatg 1440
tttgatatag tttataacat tcttaaaact aactttgagt tttctgataa acttcaagca 1500
agagatttta taaatgagtt aaggcaaaat cttttagaca tgaatctttc tctttttaag 1560
gatcataagt ttaataaatt ggagcatgct ttgggtgaat tgataaattt taaaaaggta 1620
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<210> 553

<211> 434

<212> PRT

<213> Homo sapiens

<400> 553

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Met Lys Arg Val Tyr Ser Lys Ile Glu Ser Ile Ala Gly Asn Val Ile
 1             5             10             15

Thr Val Thr Ala Gln Gly Ile Lys Tyr Gly Glu Leu Ala Ile Val Lys
      20             25             30

Ala Lys Asp Thr Ser Ser Leu Ala Glu Val Ile Lys Leu Asp Arg Glu
      35             40             45

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Lys Val Ser Leu Gln Val Tyr Gly Gly Thr Arg Gly Val Ser Thr Ser
 50 55 60
 Asp Glu Ile Lys Phe Leu Gly His Ser Met Gln Val Ser Phe Ser Asp
 65 70 75 80
 Asn Leu Leu Gly Arg Ile Phe Asp Gly Ser Gly Asn Pro Arg Asp Gly
 85 90 95
 Gly Pro Ser Leu Asp Asp Asn Leu Ile Glu Ile Gly Gly Pro Ser Ala
 100 105 110
 Asn Pro Thr Lys Arg Ile Val Pro Arg Asn Met Ile Arg Thr Gly Leu
 115 120 125
 Pro Met Ile Asp Val Phe Asn Thr Leu Val Glu Ser Gln Lys Leu Pro
 130 135 140
 Ile Phe Ser Val Ser Gly Glu Pro Tyr Asn Glu Leu Leu Ile Arg Ile
 145 150 155 160
 Ala Leu Gln Ala Glu Val Asp Leu Ile Ile Leu Gly Gly Met Gly Leu
 165 170 175
 Lys His Asp Asp Tyr Leu Thr Phe Lys Asp Ser Leu Glu Lys Gly Gly
 180 185 190
 Ala Leu Ser Arg Ala Ile Phe Phe Val His Thr Ala Asn Asp Ser Val
 195 200 205
 Val Glu Ser Leu Thr Val Pro Asp Ile Ser Leu Ser Val Ala Glu Lys
 210 215 220
 Phe Ala Leu Lys Gly Lys Lys Val Leu Val Leu Leu Thr Asp Met Thr
 225 230 235 240
 Asn Phe Ala Asp Ala Met Lys Glu Ile Ser Ile Thr Met Glu Gln Val
 245 250 255
 Pro Ser Asn Arg Gly Tyr Pro Gly Asp Leu Tyr Ser Gln Leu Ala Tyr
 260 265 270
 Arg Tyr Glu Lys Ala Ile Asp Phe Glu Gly Ala Gly Ser Ile Thr Ile
 275 280 285
 Leu Ala Val Thr Thr Met Pro Gly Asp Asp Val Thr His Pro Val Pro
 290 295 300
 Asp Asn Thr Gly Tyr Ile Thr Glu Gly Gln Tyr Tyr Leu Lys Gly Gly
 305 310 315 320
 Arg Ile Glu Pro Phe Gly Ser Leu Ser Arg Leu Lys Gln Met Val Asn
 325 330 335
 Ser Arg Thr Arg Asp Asp His Arg Thr Ile Met Asp Ser Met Ile Lys
 340 345 350
 Leu Tyr Ala Ser Ser Lys Glu Ser Val Glu Lys Lys Ala Met Gly Phe
 355 360 365

Asn Met Thr Lys Trp Asp Glu Lys Leu Leu Lys Tyr Ser Asn Met Phe
 370 375 380
 Glu Ser Lys Met Met Asp Leu Ser Val Asn Ile Pro Leu Glu Glu Ala
 385 390 395 400
 Leu Asp Leu Gly Trp Ser Ile Leu Ala Ser Cys Phe Ser Pro Lys Glu
 405 410 415
 Thr Gly Ile Lys Thr Asp Leu Ile Glu Lys Tyr Trp Pro Lys Lys Glu
 420 425 430
 Thr Tyr

 <210> 554
 <211> 414
 <212> PRT
 <213> Homo sapiens

 <400> 554
 Gln Gly Ile Lys Tyr Gly Glu Leu Ala Ile Val Lys Ala Lys Asp Thr
 1 5 10 15
 Ser Ser Leu Ala Glu Val Ile Lys Leu Asp Arg Glu Lys Val Ser Leu
 20 25 30
 Gln Val Tyr Gly Gly Thr Arg Gly Val Ser Thr Ser Asp Glu Ile Lys
 35 40 45
 Phe Leu Gly His Ser Met Gln Val Ser Phe Ser Asp Asn Leu Leu Gly
 50 55 60
 Arg Ile Phe Asp Gly Ser Gly Asn Pro Arg Asp Gly Gly Pro Ser Leu
 65 70 75 80
 Asp Asp Asn Leu Ile Glu Ile Gly Gly Pro Ser Ala Asn Pro Thr Lys
 85 90 95
 Arg Ile Val Pro Arg Asn Met Ile Arg Thr Gly Leu Pro Met Ile Asp
 100 105 110
 Val Phe Asn Thr Leu Val Glu Ser Gln Lys Leu Pro Ile Phe Ser Val
 115 120 125
 Ser Gly Glu Pro Tyr Asn Glu Leu Leu Ile Arg Ile Ala Leu Gln Ala
 130 135 140
 Glu Val Asp Leu Ile Ile Leu Gly Gly Met Gly Leu Lys His Asp Asp
 145 150 155 160
 Tyr Leu Thr Phe Lys Asp Ser Leu Glu Lys Gly Gly Ala Leu Ser Arg
 165 170 175
 Ala Ile Phe Phe Val His Thr Ala Asn Asp Ser Val Val Glu Ser Leu
 180 185 190
 Thr Val Pro Asp Ile Ser Leu Ser Val Ala Glu Lys Phe Ala Leu Lys
 195 200 205

Gly Lys Lys Val Leu Val Leu Leu Thr Asp Met Thr Asn Phe Ala Asp
 210 215 220
 Ala Met Lys Glu Ile Ser Ile Thr Met Glu Gln Val Pro Ser Asn Arg
 225 230 235 240
 Gly Tyr Pro Gly Asp Leu Tyr Ser Gln Leu Ala Tyr Arg Tyr Glu Lys
 245 250 255
 Ala Ile Asp Phe Glu Gly Ala Gly Ser Ile Thr Ile Leu Ala Val Thr
 260 265 270
 Thr Met Pro Gly Asp Asp Val Thr His Pro Val Pro Asp Asn Thr Gly
 275 280 285
 Tyr Ile Thr Glu Gly Gln Tyr Tyr Leu Lys Gly Gly Arg Ile Glu Pro
 290 295 300
 Phe Gly Ser Leu Ser Arg Leu Lys Gln Met Val Asn Ser Arg Thr Arg
 305 310 315 320
 Asp Asp His Arg Thr Ile Met Asp Ser Met Ile Lys Leu Tyr Ala Ser
 325 330 335
 Ser Lys Glu Ser Val Glu Lys Lys Ala Met Gly Phe Asn Met Thr Lys
 340 345 350
 Trp Asp Glu Lys Leu Leu Lys Tyr Ser Asn Met Phe Glu Ser Lys Met
 355 360 365
 Met Asp Leu Ser Val Asn Ile Pro Leu Glu Glu Ala Leu Asp Leu Gly
 370 375 380
 Trp Ser Ile Leu Ala Ser Cys Phe Ser Pro Lys Glu Thr Gly Ile Lys
 385 390 395 400
 Thr Asp Leu Ile Glu Lys Tyr Trp Pro Lys Lys Glu Thr Tyr
 405 410

<210> 555

<211> 1305

<212> DNA

<213> Homo sapiens

<400> 555

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 gaagtaatta aacttgatcg agaaaaagtt tctcttcagg tttatggtgg tacaagaggt 180
 gtttccacgt cagacgagat aaagttttta gggcattcaa tgcaggtttc attttctgac 240
 aatttggtgg gcagaatttt tgatggttct gggaatccta gagatggggg cccttctctt 300
 gatgataatt tgattgaaat tgggtgggcct tctgcaaatt ctacaaaacg cattgttcct 360
 agaaatatga taaggacagg gcttccaatg atagatgttt ttaatactct tgttgaatct 420
 caaaaattgc caattttttc tgtttctggt gagccttata atgagcttct tataagaatt 480
 gcacttcaag cagaagttga ttttaataatt cttggcgga tgggacttaa gcatgatgat 540
 tatttaactt ttaaagattc tttagaaaag ggaggtgctt taagtagagc aatttttttt 600
 gttcatactg ctaatgattc tgttggtgaa tctttaactg ttcctgatat ttcactttct 660
 gttgctgaaa agtttgctct aaaggggcaa aaagtttttg tgcttctcac agacatgaca 720
 aattttgctg atgcaatgaa agaaatatct attacaatgg aacaagtgcc ttctaataga 780
 gggttatccc gggatttgta ttctcagctt gcatatcggt atgagaaggc tattgacttt 840

gaaggcgcag gatcaattac aatacttgca gttacaacaa tgccgggtga cgatgttact 900
catcctgttc ctgacaatac tggatacatt acagaaggctc aatactatctt aaaagggtggc 960
agaatagagc cttttgggtc tctttcaaga cttaagcaaa tggtaaatag tagaactaga 1020
gacgatcaca ggactataat ggattcaatg atcaagcttt atgcatcttc aaaagagtct 1080
gtagaaaaaa aggctatggg atttaatatg actaagtggg atgaaaaatt gctcaagtat 1140
agcaatatgt ttgaaagtaa gatgatggat ttgtctgtta atattccttt agaagaggct 1200
ttagatttag gttggagcat tcttgctagt tgttttagcc caaaagaaac ggggaataaaa 1260
acagatctta ttgaaaaata ttggcctaaa aaagagactt attga 1305

<210> 556

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 556

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gaagtaatta aacttgatcg agaaaaagtt tctcttcagg tttatggtgg tacaagaggt 120
gtttccacgt cagacgagat aaagtgtttta gggcattcaa tgcaggtttc attttctgac 180
aatttggttg gcagaatttt tgatggttct gggaatccta gagatggggg cccttctctt 240
gatgataatt tgattgaaat tgggtgggcct tctgcaaate ctacaaaacg cattgttctt 300
agaaatatga taaggacagg gcttccaatg atagatgttt ttaatactct tgttgaatct 360
caaaaattgc caattttttc tgtttctggt gagccttata atgagcttct tataagaatt 420
gcacttcaag cagaagttga ttttaataatt cttggcggaa tgggacttaa gcatgatgat 480
tatttaactt ttaaagattc tttagaaaag ggaggtgctt taagtagagc aatttttttt 540
gttcatactg ctaatgattc tgttgttgaa tctttaactg ttcctgatat ttcactttct 600
gttgctgaaa agtttgctct aaaggcgcaa aaagtgtttg tgcttctcac agacatgaca 660
aattttgctg atgcaatgaa agaaatatct attacaatgg aacaagtgcc ttctaataga 720
ggttatcccg gggatttgta ttctcagctt gcatatcggt atgagaaggc tattgacttt 780
gaaggcgcag gatcaattac aatacttgca gttacaacaa tgccgggtga cgatgttact 840
catcctgttc ctgacaatac tggatacatt acagaaggctc aatactatctt aaaagggtggc 900
agaatagagc cttttgggtc tctttcaaga cttaagcaaa tggtaaatag tagaactaga 960
gacgatcaca ggactataat ggattcaatg atcaagcttt atgcatcttc aaaagagtct 1020
gtagaaaaaa aggctatggg atttaatatg actaagtggg atgaaaaatt gctcaagtat 1080
agcaatatgt ttgaaagtaa gatgatggat ttgtctgtta atattccttt agaagaggct 1140
ttagatttag gttggagcat tcttgctagt tgttttagcc caaaagaaac ggggaataaaa 1200
acagatctta ttgaaaaata ttggcctaaa aaagagactt attga 1245

<210> 557

<211> 324

<212> PRT

<213> Homo sapiens

<400> 557

Met Arg Ser Ala Val Leu Phe Phe Phe Ala Leu Pro Phe Ser Ile Ser
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Leu Tyr Ser Ser Ser Asn Lys Asn Phe Pro Tyr Trp Ile Leu Leu Glu
20 25 30

Lys Gly Arg Gln Phe Leu Tyr Ser Lys Ser Glu Phe Ser Lys Ser Asn
35 40 45

Leu Thr His Ala Ile Asn Tyr Leu Gln Glu Ala Leu Leu Arg Lys Gly
50 55 60

Val Tyr Pro Glu Ala Ser Tyr Tyr Leu Ser Val Ala Tyr Gly Met Ser
65 70 75 80

Gly Asn Ala Ile Leu Glu Lys Leu Asn Leu Tyr Lys Ser Phe Glu Asp
85 90 95

Arg Tyr Tyr Leu Leu Asp Glu Ser Phe Glu Lys Lys Ile Leu Phe Ser
 100 105 110
 Leu Ala Lys Met Ala Glu Leu Glu Asn Asn Tyr Val Asp Thr Ile Asp
 115 120 125
 Tyr Leu Asn Asp Ile Leu Asn Lys Phe Ser Thr Lys Lys Asp Tyr Tyr
 130 135 140
 Ser Tyr His Asp Tyr Ser Gln Gly Glu Asn Ser Met Ser Asn Asn Glu
 145 150 155 160
 Leu Asn Ala Ser Phe Tyr Leu Thr Ser Tyr Leu Lys Gln Val Arg Gly
 165 170 175
 Ala Phe Gly Ile Asp Phe Thr Phe Asn Leu Tyr Arg Phe Lys Asn Tyr
 180 185 190
 Asn Val Ile Asp Thr His Gln Leu Leu Ser Lys Val Tyr Leu His Leu
 195 200 205
 Lys Ala Tyr Glu Leu Ser Ile Thr His Gly Leu Ile Ala Ala Val Gly
 210 215 220
 Ile Leu Thr Arg Met Tyr Asp Tyr Val Cys Tyr Tyr Glu Pro Val Tyr
 225 230 235 240
 Gln Phe Lys Asn Leu Arg Ser Phe Val Gln Lys Ile Asn Lys Tyr Lys
 245 250 255
 Ala Ile Lys Asn Ala Phe Glu Ser Thr Asp Phe Trp Glu Ile Val Tyr
 260 265 270
 Asn Val Ala Ala Ala Thr Tyr Ala Tyr Ser Asn Gly Asn Tyr Lys Phe
 275 280 285
 Arg Ala Ile Asp Thr Trp Lys Leu Val Val Asp Leu Ala Pro Arg Phe
 290 295 300
 Ser Pro Tyr Ile Ala Lys Ser Arg Ser Gln Ile Lys Asn Ser Val Tyr
 305 310 315 320
 Leu Lys Lys Asn

<210> 558
 <211> 304
 <212> PRT
 <213> Homo sapiens

<400> 558
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 Phe Leu Tyr Ser Lys Ser Glu Phe Ser Lys Ser Asn Leu Thr His Ala
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 Ile Asn Tyr Leu Gln Glu Ala Leu Leu Arg Lys Gly Val Tyr Pro Glu
 35 40 45

Ala Ser Tyr Tyr Leu Ser Val Ala Tyr Gly Met Ser Gly Asn Ala Ile
 50 55 60
 Leu Glu Lys Leu Asn Leu Tyr Lys Ser Phe Glu Asp Arg Tyr Tyr Leu
 65 70 75 80
 Leu Asp Glu Ser Phe Glu Lys Lys Ile Leu Phe Ser Leu Ala Lys Met
 85 90 95
 Ala Glu Leu Glu Asn Asn Tyr Val Asp Thr Ile Asp Tyr Leu Asn Asp
 100 105 110
 Ile Leu Asn Lys Phe Ser Thr Lys Lys Asp Tyr Tyr Ser Tyr His Asp
 115 120 125
 Tyr Ser Gln Gly Glu Asn Ser Met Ser Asn Asn Glu Leu Asn Ala Ser
 130 135 140
 Phe Tyr Leu Thr Ser Tyr Leu Lys Gln Val Arg Gly Ala Phe Gly Ile
 145 150 155 160
 Asp Phe Thr Phe Asn Leu Tyr Arg Phe Lys Asn Tyr Asn Val Ile Asp
 165 170 175
 Thr His Gln Leu Leu Ser Lys Val Tyr Leu His Leu Lys Ala Tyr Glu
 180 185 190
 Leu Ser Ile Thr His Gly Leu Ile Ala Ala Val Gly Ile Leu Thr Arg
 195 200 205
 Met Tyr Asp Tyr Val Cys Tyr Tyr Glu Pro Val Tyr Gln Phe Lys Asn
 210 215 220
 Leu Arg Ser Phe Val Gln Lys Ile Asn Lys Tyr Lys Ala Ile Lys Asn
 225 230 235 240
 Ala Phe Glu Ser Thr Asp Phe Trp Glu Ile Val Tyr Asn Val Ala Ala
 245 250 255
 Ala Thr Tyr Ala Tyr Ser Asn Gly Asn Tyr Lys Phe Arg Ala Ile Asp
 260 265 270
 Thr Trp Lys Leu Val Val Asp Leu Ala Pro Arg Phe Ser Pro Tyr Ile
 275 280 285
 Ala Lys Ser Arg Ser Gln Ile Lys Asn Ser Val Tyr Leu Lys Lys Asn
 290 295 300

<210> 559

<211> 975

<212> DNA

<213> Homo sapiens

<400> 559

atgagaagtg cggttttatt tttttttgct ttgccttttt ctatttcttt gtattcttca 60
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 aaatctgaat ttagtaagtc taatcttaca catgctatta attatttgca ggaagctttg 180
 cttagaaaag gcgtttatcc tgaggctagt tattatttgt cagtagctta tggtagtct 240
 ggcaatgcta ttcttgaaaa attaaacctt tataagtctt ttgaagacag atattatttg 300

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ctagatgaat cttttgaaaa aaaaatactt ttttctttag ctaaaatggc tgaacttgag 360
aataattatg ttgatactat tgattatttg aatgacatat taaataagtt ttcaactaaa 420
aaagattatt atagttatca tgattattct caaggcgaaa acagtatgtc aaataatgaa 480
cttaatgctt cattttatct aacttcttat ttaaaacaag taagaggagc ttttgggtatt 540
gattttactt ttaatcttta cagattttaa aactacaatg ttattgatac tcatcaatta 600
ttgtcaaaaag tttatttgca cttaaaagct tatgagcttt caattactca tggacttata 660
gctgcagtag gaattttaac aagaatgtat gattatgttt gttattatga acctgtgtat 720
cagtttaaaa atttaaggct ttttggtcaa aaaattaata agtataaggc aataaaaaat 780
gcttttgaat ctacagattt ttgggaaata gtttataatg ttgctgctgc tacttatgca 840
tattctaata gcaattataa atttagagca atagatactt ggaaattagt agtagatctt 900
gcgccaaggt tttctcctta tattgctaaa tcaagaagtc aaattaaaaa ttctgtatat 960
ttaaaaaaaa attaa

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975

<210> 560

<211> 915

<212> DNA

<213> Homo sapiens

<400> 560

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agtaataaaa attttccgta ttggatttta cttgaaaaag gcaggcaatt tctttattct 60
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cttagaaaag gcgtttatcc tgaggctagt tattatttgg cagtagctta tgggtatgtct 180
ggcaatgcta ttcttgaaaa attaaacctt tataagtctt ttgaagacag atattatttg 240
ctagatgaat cttttgaaaa aaaaatactt ttttctttag ctaaaatggc tgaacttgag 300
aataattatg ttgatactat tgattatttg aatgacatat taaataagtt ttcaactaaa 360
aaagattatt atagttatca tgattattct caaggcgaaa acagtatgtc aaataatgaa 420
cttaatgctt cattttatct aacttcttat ttaaaacaag taagaggagc ttttgggtatt 480
gattttactt ttaatcttta cagattttaa aactacaatg ttattgatac tcatcaatta 540
ttgtcaaaaag tttatttgca cttaaaagct tatgagcttt caattactca tggacttata 600
gctgcagtag gaattttaac aagaatgtat gattatgttt gttattatga acctgtgtat 660
cagtttaaaa atttaaggct ttttggtcaa aaaattaata agtataaggc aataaaaaat 720
gcttttgaat ctacagattt ttgggaaata gtttataatg ttgctgctgc tacttatgca 780
tattctaata gcaattataa atttagagca atagatactt ggaaattagt agtagatctt 840
gcgccaaggt tttctcctta tattgctaaa tcaagaagtc aaattaaaaa ttctgtatat 900
ttaaaaaaaa attaa

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915

<210> 561

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (179)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 561

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Met Leu Lys Ser Asn Lys Val Val Leu Ile Gly Ala Gly Gly Val Gly
 1             5             10             15

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Ser Ser Phe Ala Tyr Ala Leu Thr Ile Asp Asn Ser Leu Val His Glu
      20             25             30

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Leu Val Ile Ile Asp Val Asn Glu Asn Lys Ala Lys Gly Glu Val Met
 35             40             45

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```

Asp Leu Asn His Gly Gln Met Phe Leu Lys Lys Asn Ile Asn Val Leu
 50             55             60

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Phe Gly Thr Tyr Lys Asp Cys Ala Asn Ala Asp Ile Val Val Ile Thr

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65		70		75		80
Ala Gly Leu Asn Gln Lys Pro Gly Glu Thr Arg Leu Asp Leu Val Asp						
	85			90		95
Lys Asn Ser Lys Ile Phe Lys Asp Ile Ile Thr Asn Val Val Ser Ser						
	100			105		110
Gly Phe Asp Gly Ile Phe Val Val Ala Ser Asn Pro Val Asp Ile Met						
	115			120		125
Thr Tyr Val Thr Met Lys Tyr Ser Lys Phe Pro Ile His Lys Val Ile						
	130			135		140
Gly Thr Gly Thr Ile Leu Asp Thr Ser Arg Leu Arg Tyr Phe Leu Ser						
	145			150		155
						160
Asp His Phe Asn Val Asn Thr Gln Asn Ile His Ser Tyr Ile Met Gly						
	165			170		175
Glu His Xaa Asp Ser Ser Phe Ala Thr Trp Asp Glu Thr Lys Ile Ala						
	180			185		190
Met Lys Pro Leu Ser Glu Tyr Leu Ala Glu Gly Lys Ile Thr Glu Leu						
	195			200		205
Glu Leu Asp Glu Ile His Lys Lys Val Val Asn Ala Ala Tyr Glu Val						
	210			215		220
Ile Lys Leu Lys Gly Ala Thr Tyr Tyr Ala Ile Gly Leu Gly Ile Lys						
	225			230		235
						240
Asn Ile Val Asn Ala Ile Ile Gly Asp Gln Asn Val Ile Leu Pro Ile						
	245			250		255
Ser Ser Tyr Ile Asn Gly Gln Tyr Gly Gly Leu Ile Lys Asp Ile Tyr						
	260			265		270
Ile Gly Ala Pro Ala Ile Val Cys Lys Glu Gly Val Lys Glu Val Leu						
	275			280		285
Asn Phe Lys Ile Ser Pro Lys Glu Leu Asp Lys Phe Asn Ser Ser Ala						
	290			295		300
Asn Gln Leu Lys Ser Tyr Ile Asp Lys Met Glu Phe						
	305			310		315
<210> 562						
<211> 295						
<212> PRT						
<213> Homo sapiens						
<220>						
<221> SITE						
<222> (158)						
<223> Xaa equals any of the naturally occurring L-amino acids						
<400> 562						
Ala Leu Thr Ile Asp Asn Ser Leu Val His Glu Leu Val Ile Ile Asp						
1		5		10		15

Val Asn Glu Asn Lys Ala Lys Gly Glu Val Met Asp Leu Asn His Gly
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 Gln Met Phe Leu Lys Lys Asn Ile Asn Val Leu Phe Gly Thr Tyr Lys
 35 40 45
 Asp Cys Ala Asn Ala Asp Ile Val Val Ile Thr Ala Gly Leu Asn Gln
 50 55 60
 Lys Pro Gly Glu Thr Arg Leu Asp Leu Val Asp Lys Asn Ser Lys Ile
 65 70 75 80
 Phe Lys Asp Ile Ile Thr Asn Val Val Ser Ser Gly Phe Asp Gly Ile
 85 90 95
 Phe Val Val Ala Ser Asn Pro Val Asp Ile Met Thr Tyr Val Thr Met
 100 105 110
 Lys Tyr Ser Lys Phe Pro Ile His Lys Val Ile Gly Thr Gly Thr Ile
 115 120 125
 Leu Asp Thr Ser Arg Leu Arg Tyr Phe Leu Ser Asp His Phe Asn Val
 130 135 140
 Asn Thr Gln Asn Ile His Ser Tyr Ile Met Gly Glu His Xaa Asp Ser
 145 150 155 160
 Ser Phe Ala Thr Trp Asp Glu Thr Lys Ile Ala Met Lys Pro Leu Ser
 165 170 175
 Glu Tyr Leu Ala Glu Gly Lys Ile Thr Glu Leu Glu Leu Asp Glu Ile
 180 185 190
 His Lys Lys Val Val Asn Ala Ala Tyr Glu Val Ile Lys Leu Lys Gly
 195 200 205
 Ala Thr Tyr Tyr Ala Ile Gly Leu Gly Ile Lys Asn Ile Val Asn Ala
 210 215 220
 Ile Ile Gly Asp Gln Asn Val Ile Leu Pro Ile Ser Ser Tyr Ile Asn
 225 230 235 240
 Gly Gln Tyr Gly Gly Leu Ile Lys Asp Ile Tyr Ile Gly Ala Pro Ala
 245 250 255
 Ile Val Cys Lys Glu Gly Val Lys Glu Val Leu Asn Phe Lys Ile Ser
 260 265 270
 Pro Lys Glu Leu Asp Lys Phe Asn Ser Ser Ala Asn Gln Leu Lys Ser
 275 280 285
 Tyr Ile Asp Lys Met Glu Phe
 290 295

<210> 563
 <211> 950
 <212> DNA
 <213> Homo sapiens

<400> 563
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aataaagcaa aaggggaggt catggacctt aatcatggcc aaatgttttt aaagaagaat 180
attaatgtat tgtttgggac ttacaaagat tgtgctaata cagatattgt tgtaattaca 240
gcaggactta atcaaaagcc tgggtgagaca agacttgatt tggttgataa aaattctaaa 300
atttttaaag atattataac taatgttgta tctagcgggt ttgatgggat ttttgttggt 360
gcaagcaatc ctgtagacat tatgacttat gttacaatga aatattccaa atttcctatt 420
cataagggtta ttggtactgg gactattcct gatacttcaa gacttagata ttttttaagt 480
gatcatttta atgtgaacac tcaaaatata cattcatata ttatgggtga gcacgtgaca 540
gttcttttgc tacgtgggat gaaacaaaaa tagcaatgaa gcctttgtca gaatatcctg 600
ctgaaggcaa aataactgag ttggagcttg atgaaattca taaaaagggt gtgaatgctg 660
cttatgaagt tattaagtta aagggggcaa cctattatgc tattggactt ggtattaaga 720
atattgtaaa tgcaataatt ggagatcaga atgttattct gccaatatct tcttatatta 780
atggccagta tgggggattg attaaagata tttatatttg agcgctgct atagtttgta 840
aggaaggagt caaagaagtt ttaaacttta agataagccc taaagagctt gataagttta 900
atagttctgc taatcagctt aaaagctata ttgataaaat ggaattttag 950

<210> 564

<211> 887

<212> DNA

<213> Homo sapiens

<400> 564
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aatgtattgt ttgggactta caaagattgt gctaatagcag atattggtgt aattacagca 180
ggacttaatc aaaagcctgg tgagacaaga cttgatttgg ttgataaaaa ttctaaaatt 240
tttaaagata ttataactaa tgttgtagct agcgggtttt atggtatttt tgttggtgca 300
agcaatcctg tagacattat gacttatgtt acaatgaaat attccaaatt tcctattcat 360
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cttttgctac gtgggatgaa acaaaaatag caatgaagcc tttgtcagaa tatcttgctg 540
aaggcaaaaat aactgagttg gagcttgatg aaattcataa aaagggttggt aatgctgctt 600
atgaagttat taagttaaag ggggcaacct attatgctat tggacttggt attaagaata 660
ttgtaaatgc aataattgga gatcagaatg ttattctgcc aatatcttct tatattaatg 720
gccagtatgg gggattgatt aaagatatatt atattggagc gcctgctata gtttgtaagg 780
aaggagtcaa agaagtttta aactttaaga taagccctaa agagcttgat aagtttaata 840
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<210> 565

<211> 342

<212> PRT

<213> Homo sapiens

<400> 565

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Lys Leu Asn Glu Lys Pro Lys Thr Gly Phe Tyr Ile Glu Tyr Tyr Ser
35 40 45
Val Asp Asp Thr Glu Lys Leu Tyr Leu Tyr Lys Glu Asn Asn Leu Ile
50 55 60
Lys Tyr Lys Thr Ile Gln Ile Ile Glu Asn Thr Lys Lys Ile Thr Cys
65 70 75 80

Tyr Asp Thr Lys Asp Thr Lys Arg Lys Glu Glu Ile Tyr Asp Asn Leu
 85 90 95
 Asn Asn Lys Ile Gln Glu Ile Glu Tyr Asp Ser Lys Gly Lys Thr Leu
 100 105 110
 Glu Thr Ala Asn Tyr Val Tyr Glu Asn Glu Asn Leu Ile Ser Lys Asn
 115 120 125
 Leu Lys Thr Ile Asn Gln Lys Pro Lys Leu Ile Tyr Tyr Ser Lys Asp
 130 135 140
 Asp Asn Gly Lys Leu Leu Lys Ile Thr Gly Ser Asn Phe Gln Ile Trp
 145 150 155 160
 Asn Tyr Gly Ile Asn Gly Asp Ile Lys Ser Thr Tyr Phe Asp Ile Lys
 165 170 175
 Lys Ala Thr Thr Lys Val Ile Lys Tyr Asp Asp Lys Lys Arg Asn Ser
 180 185 190
 Asn Ser Thr Ile Ile Val Asn Asn Lys Ile Lys Ser Lys Glu Lys Asn
 195 200 205
 Gln Tyr Leu Asp Glu Glu Lys Ile Val Asn Thr Phe Glu Glu Glu Asn
 210 215 220
 Thr Lys Ile Ile Ser Thr Tyr Lys Ala Asn Asn Leu Ile Lys Glu Glu
 225 230 235 240
 Thr Tyr Lys Asn Asn Glu Leu Ile Lys Val Asn Asp Phe Gln Tyr Asn
 245 250 255
 Glu Ser Asp Met Ile Ile Phe Gln Asn Thr Lys Glu Lys Asp Lys Asp
 260 265 270
 Gln Tyr Thr Asn Thr Lys Ile Glu Tyr Glu Tyr Asn Lys Asp Asn Gln
 275 280 285
 Leu Lys Ser Lys Lys Ile Tyr Glu Asn Asp Ile Ile Tyr Leu Lys Thr
 290 295 300
 Glu Tyr His Asn Asp Asn Glu Tyr Glu Glu Glu Ile Tyr Tyr Asn Lys
 305 310 315 320
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 325 330 335
 Lys Pro Ile Gly Thr Asn
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<210> 566

<211> 323

<212> PRT

<213> Homo sapiens

<400> 566

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 20 25 30
 Thr Glu Lys Leu Tyr Leu Tyr Lys Glu Asn Asn Leu Ile Lys Tyr Lys
 35 40 45
 Thr Ile Gln Ile Ile Glu Asn Thr Lys Lys Ile Thr Cys Tyr Asp Thr
 50 55 60
 Lys Asp Thr Lys Arg Lys Glu Glu Ile Tyr Asp Asn Leu Asn Asn Lys
 65 70 75 80
 Ile Gln Glu Ile Glu Tyr Asp Ser Lys Gly Lys Thr Leu Glu Thr Ala
 85 90 95
 Asn Tyr Val Tyr Glu Asn Glu Asn Leu Ile Ser Lys Asn Leu Lys Thr
 100 105 110
 Ile Asn Gln Lys Pro Lys Leu Ile Tyr Tyr Ser Lys Asp Asp Asn Gly
 115 120 125
 Lys Leu Leu Lys Ile Thr Gly Ser Asn Phe Gln Ile Trp Asn Tyr Gly
 130 135 140
 Ile Asn Gly Asp Ile Lys Ser Thr Tyr Phe Asp Ile Lys Lys Ala Thr
 145 150 155 160
 Thr Lys Val Ile Lys Tyr Asp Asp Lys Lys Arg Asn Ser Asn Ser Thr
 165 170 175
 Ile Ile Val Asn Asn Lys Ile Lys Ser Lys Glu Lys Asn Gln Tyr Leu
 180 185 190
 Asp Glu Glu Lys Ile Val Asn Thr Phe Glu Glu Glu Asn Thr Lys Ile
 195 200 205
 Ile Ser Thr Tyr Lys Ala Asn Asn Leu Ile Lys Glu Glu Thr Tyr Lys
 210 215 220
 Asn Asn Glu Leu Ile Lys Val Asn Asp Phe Gln Tyr Asn Glu Ser Asp
 225 230 235 240
 Met Ile Ile Phe Gln Asn Thr Lys Glu Lys Asp Lys Asp Gln Tyr Thr
 245 250 255
 Asn Thr Lys Ile Glu Tyr Glu Tyr Asn Lys Asp Asn Gln Leu Lys Ser
 260 265 270
 Lys Lys Ile Tyr Glu Asn Asp Ile Ile Tyr Leu Lys Thr Glu Tyr His
 275 280 285
 Asn Asp Asn Glu Tyr Glu Glu Glu Ile Tyr Tyr Asn Lys Lys Pro Ala
 290 295 300
 Leu Arg Val Lys His Lys Asn Gly Lys Val Thr Glu Glu Lys Pro Ile
 305 310 315 320
 Gly Thr Asn

<210> 567
 <211> 1029
 <212> DNA
 <213> Homo sapiens

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 ggggttttata ttgagtatta ttctgttgat gatactgaaa aactctacct atacaaagaa 180
 aataacttaa taaaatacaa aacaattcaa atcatagaaa acacaaaaaa aattacatgt 240
 tatgatacaa aagatacaaa aagaaaagaa gagatttacg ataattttaa taacaaaata 300
 caagaaattg aatatgatag caaaggaaaa actcttgaaa cagcaaatta cgtttatgaa 360
 aacgaaaact taatatctaa aaatttataa acaataaacc aaaaaccaa attaatatat 420
 tattctaaag acgacaatgg taaattacta aaaataacag gatcaaattt ccaaatattg 480
 aactatggaa ttaattggcg cataaaatct acatatattt acatcaaaaa agcaacaaca 540
 aaagtataaa aatatgatga taaaaaaga aattcaaaca gtacaataat tgtaataaat 600
 aaaataaaat ccaagaaaaa aaaccaatat ttagatgaag aaaaaatagt aaataccttt 660
 gaagaagaga atacaaaaat catatctacc tacaaggcaa acaacctaat taaagaagaa 720
 acatataaaa ataattgaact tataaaagta aatgatattt aatacaacga atctgatatg 780
 ataatttttc aaaacactaa agaaaaggat aaagaccaat acaccaatac taaaattgaa 840
 tacgaatata acaagacaa tcaattaaaa agcaaaaaaa tttatgagaa cgatataatt 900
 tatctaaaaa ctgaatacca caatgacaat gaatatgaag aagaaatata ctacaataaa 960
 aaacctgctc ttagggtaaa acacaagaac ggaaaagtca ccgaagaaaa accaatagga 1020
 acaaattaa 1029

<210> 568
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 568
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 gaaaataact taataaaata caaaacaatt caaatcatag aaacacaaa aaaaattaca 180
 tgttatgata caaaagatac aaaaagaaaa gaagagattt acgataattt aaataacaaa 240
 atacaagaaa ttgaatatga tagcaaagga aaaactcttg aaacagcaaa ttacgtttat 300
 gaaaacgaaa acttaatatc taaaaattta aaacaataa accaaaaacc aaaattaata 360
 tattatttcta aagacgacaa tggtaaatta ctaaaaataa caggatcaaa tttccaaatt 420
 tggaactatg gaattaatgg cgacataaaa tctacatatt ttgacatcaa aaaagcaaca 480
 acaaaagtta taaaatatga tgataaaaaa agaaattcaa acagtacaat aattgttaat 540
 aataaaataa aatccaaaaga aaaaaccaa tatttagatg aagaaaaaat agtaaatacc 600
 tttgaagaag agaatacaaa aatcatatct acctacaagg caaacaacct aattaaagaa 660
 gaaacatata aaaataatga acttataaaa gttaatgatt ttcaatacaa cgaatctgat 720
 atgataattt ttcaaaacac taaagaaaag gataaagacc aatacaccaa tactaaaatt 780
 gaatacgaat ataacaaga caatcaatta aaaagcaaaa aaatttatga gaacgatata 840
 atttatctaa aaactgaata ccacaatgac aatgaatatg aagaagaaat atactacaat 900
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<210> 569
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 569
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20

25

30

Ile Ile Asn Thr Lys Lys Glu Asn Ile Asp Leu Lys Lys Gly Ile Glu
 35 40 45
 Lys Gln Leu Asp Lys Ile Tyr Asp Lys Ile Thr Glu His Ile Val Asn
 50 55 60
 Asn Asp Asp Lys Ser Ile Ile Glu Asp Ile Tyr Ile Asn Gln Asp Ile
 65 70 75 80
 Ile Lys Thr Glu Leu Glu Ile Ser Lys Leu Lys Lys Glu Met Asp Lys
 85 90 95
 Lys Lys Leu Gln Asn Ile Ile Thr Ala Lys Glu Lys His Asn Thr Lys
 100 105 110
 Thr Lys Ile Asp Glu Leu Lys Lys Asn Ile Gln Asn Ile Asn Asn Lys
 115 120 125
 Gln Lys Lys Phe Ala Glu Tyr Phe Asn Asn Leu Lys Lys Leu Lys Val
 130 135 140
 Lys Tyr Lys Lys Ile Glu Glu Gln Thr Asn Ile Ser Asn Leu Asn Lys
 145 150 155 160
 Glu Phe Phe Ile Arg Glu Glu Leu Phe Phe Ile Asn Tyr Ile Asp Leu
 165 170 175
 Lys Lys Ile Glu Asn Tyr Tyr Leu Leu Glu Ile Ser Asn Ile Thr Pro
 180 185 190
 Glu Lys Ile Glu Thr Lys Lys Ala Val Phe Lys Thr Ser Ser Ser Val
 195 200 205
 Asn Glu Ile Ala Asp His Ile Thr Lys Tyr Ser Leu Lys Glu Ile Leu
 210 215 220
 Gly Arg Glu Phe Leu Lys Ile Asn Ile Asn Val Lys Asn Asn Ser Asp
 225 230 235 240
 Ala Lys Ile Tyr Ile Asn Glu Lys Phe Val Ser Lys Gly Ile Tyr His
 245 250 255
 Asp Asn Ile Phe Asp Ile Ser Lys Leu Pro Asn Lys Glu Ile Glu Ile
 260 265 270
 Gln Ile Thr Ser Ala Asn Phe Glu Asn Tyr Ser Ile Lys Arg Thr Val
 275 280 285
 Lys Asn Ala Asp Ser Ile Ile Leu Asp Ile Asp Leu Lys Arg Thr Ile
 290 295 300
 Ser Lys Lys Val Ser Ile Lys Ser Asn Val Gln Ser Lys Val Phe Lys
 305 310 315 320
 Lys Gly Ile Phe Met Gly Glu Thr Pro Ile Glu Ile Glu Lys Pro Glu
 325 330 335
 Asn Gln Asp Ile Ile Leu Leu Lys Ser Lys Gly Tyr Lys Asp Lys Phe

340 345 350
 Lys Leu Ile Asn Lys Glu Glu Asp Gln Val Glu Ile Glu Met Ile Lys
 355 360 365
 Thr Asn Lys Asn Arg Leu Ile Asp Thr Arg Asp Lys Phe Tyr Val Asn
 370 375 380
 Leu Ala Val Phe Thr Leu Ser Thr Ile Gly Ala Ile Phe Ala Gly Thr
 385 390 395 400
 Leu Leu Asn Asn Ser Glu Val Leu Tyr Lys Ile Thr Gly Asn His Phe
 405 410 415
 Ile Asn Lys Arg Leu Thr Ala Glu Asp Val Tyr Met Ala Lys Ala Glu
 420 425 430
 Gln Met Thr Ala Thr Phe Leu Phe Gly Val Gly Ile Thr Leu Thr Ile
 435 440 445
 Gly Ser Phe Ile Ser Leu Ile Thr His Leu Val Glu Tyr Ile Lys Glu
 450 455 460
 Ala Asn Met Gly Glu
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 <210> 570
 <211> 446
 <212> PRT
 <213> Homo sapiens
 <400> 570
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 20 25 30
 Asp Lys Ile Thr Glu His Ile Val Asn Asn Asp Asp Lys Ser Ile Ile
 35 40 45
 Glu Asp Ile Tyr Ile Asn Gln Asp Ile Ile Lys Thr Glu Leu Glu Ile
 50 55 60
 Ser Lys Leu Lys Lys Glu Met Asp Lys Lys Lys Leu Gln Asn Ile Ile
 65 70 75 80
 Thr Ala Lys Glu Lys His Asn Thr Lys Thr Lys Ile Asp Glu Leu Lys
 85 90 95
 Lys Asn Ile Gln Asn Ile Asn Asn Lys Gln Lys Lys Phe Ala Glu Tyr
 100 105 110
 Phe Asn Asn Leu Lys Lys Leu Lys Val Lys Tyr Lys Lys Ile Glu Glu
 115 120 125
 Gln Thr Asn Ile Ser Asn Leu Asn Lys Glu Phe Phe Ile Arg Glu Glu
 130 135 140
 Leu Phe Phe Ile Asn Tyr Ile Asp Leu Lys Lys Ile Glu Asn Tyr Tyr

145		150		155		160									
Leu	Leu	Glu	Ile	Ser	Asn	Ile	Thr	Pro	Glu	Lys	Ile	Glu	Thr	Lys	Lys
				165					170					175	
Ala	Val	Phe	Lys	Thr	Ser	Ser	Ser	Val	Asn	Glu	Ile	Ala	Asp	His	Ile
			180					185					190		
Thr	Lys	Tyr	Ser	Leu	Lys	Glu	Ile	Leu	Gly	Arg	Glu	Phe	Leu	Lys	Ile
		195					200					205			
Asn	Ile	Asn	Val	Lys	Asn	Asn	Ser	Asp	Ala	Lys	Ile	Tyr	Ile	Asn	Glu
	210					215					220				
Lys	Phe	Val	Ser	Lys	Gly	Ile	Tyr	His	Asp	Asn	Ile	Phe	Asp	Ile	Ser
225					230					235					240
Lys	Leu	Pro	Asn	Lys	Glu	Ile	Glu	Ile	Gln	Ile	Thr	Ser	Ala	Asn	Phe
				245					250					255	
Glu	Asn	Tyr	Ser	Ile	Lys	Arg	Thr	Val	Lys	Asn	Ala	Asp	Ser	Ile	Ile
			260					265					270		
Leu	Asp	Ile	Asp	Leu	Lys	Arg	Thr	Ile	Ser	Lys	Lys	Val	Ser	Ile	Lys
	275						280					285			
Ser	Asn	Val	Gln	Ser	Lys	Val	Phe	Lys	Lys	Gly	Ile	Phe	Met	Gly	Glu
	290					295					300				
Thr	Pro	Ile	Glu	Ile	Glu	Lys	Pro	Glu	Asn	Gln	Asp	Ile	Ile	Leu	Leu
305					310					315					320
Lys	Ser	Lys	Gly	Tyr	Lys	Asp	Lys	Phe	Lys	Leu	Ile	Asn	Lys	Glu	Glu
				325					330					335	
Asp	Gln	Val	Glu	Ile	Glu	Met	Ile	Lys	Thr	Asn	Lys	Asn	Arg	Leu	Ile
			340					345					350		
Asp	Thr	Arg	Asp	Lys	Phe	Tyr	Val	Asn	Leu	Ala	Val	Phe	Thr	Leu	Ser
		355					360					365			
Thr	Ile	Gly	Ala	Ile	Phe	Ala	Gly	Thr	Leu	Leu	Asn	Asn	Ser	Glu	Val
	370					375					380				
Leu	Tyr	Lys	Ile	Thr	Gly	Asn	His	Phe	Ile	Asn	Lys	Arg	Leu	Thr	Ala
385					390					395					400
Glu	Asp	Val	Tyr	Met	Ala	Lys	Ala	Glu	Gln	Met	Thr	Ala	Thr	Phe	Leu
				405					410					415	
Phe	Gly	Val	Gly	Ile	Thr	Leu	Thr	Ile	Gly	Ser	Phe	Ile	Ser	Leu	Ile
			420					425					430		
Thr	His	Leu	Val	Glu	Tyr	Ile	Lys	Glu	Ala	Asn	Met	Gly	Glu		
		435					440					445			

<210> 571
 <211> 1410
 <212> DNA
 <213> Homo sapiens

<400> 571

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catatagtaa acaatgatga caagagcatc attgaagaca tttatataaa tcaagatata 240
ataaaaacag aacttgaaat tagcaaatta aaaaaagaaa tggataaaaa aaaacttcaa 300
aacataataa ccgcaaaaga aaagcataac accaaaacca aaattgatga gcttaaaaaa 360
aatattcaaa atatttaacaa taaacaaaaa aaatttgcag aatattttta caatttataa 420
aaactaaaag taaaatataa aaaaatcgaa gagcaaacaa atatatcaaa tttaaataaa 480
gaatttttta taagagaaga attattttttt attaactata ttgatcttaa aaaaatagaa 540
aattattatt tgctagaaat tagcaacatc actcctgaga aaattgagac taaaaaagcg 600
gtatttataa catcatcttc tgtaaatgaa attgcagatc acataacaaa atacagcctc 660
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caagtagaaa tagaaatgat aaaaactaac aaaaatagac ttatcgacac aagagataaa 1140
ttttatgtca atctggccgt ctttacatta agcacaatag gagccatttt tgcaggaaca 1200
ttgcttaaca attcagaagt actttataaa ataacaggca atcactttat taacaaaaga 1260
ttaacagcag aagatgttta tatggcaaaa gcggaacaaa tgactgcaac atttctattt 1320
ggagtaggaa tcactttaac tattggaagc tttatctcat taataactca tttagtagaa 1380
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<210> 572

<211> 1341

<212> DNA

<213> Homo sapiens

<400> 572

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aacaatgatg acaagagcat cattgaagac atttatataa atcaagatat aataaaaaaca 180
gaacttgaaa ttagcaaat aaaaaagaaa atggataaaa aaaaacttca aaacataata 240
accgcaaaag aaaagcataa caccaaaacc aaaattgatg agcttaaaaa aaatattcaa 300
aatattaaca ataaacaaaa aaaatttgca gaatatttta acaattttaa aaaactaaaa 360
gtaaaatata aaaaaatcga agagcaaaaca aatatatcaa atttaaataa agaatttttt 420
ataagagaag aattattttt tattaactat attgatctta aaaaaataga aaattattat 480
ttgctagaaa ttagcaacat cactcctgag aaaattgaga ctaaaaaagc ggtattttaa 540
acatcatctt ctgttaatga aattgcagat cacataacaa aatacagcct caaagaaata 600
ttgggcagag aattttttaa aatcaacatt aacgtcaaaa ataactcgga tgcaaaaatc 660
tacataaatg aaaaatttgt ttcaaaaagga atctatcacg ataatatatt tgacatttct 720
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atctctaaaa aagtatcaat taaaagcaat gtacaatcta aagtttttaa aaaaggaata 900
tttatgggag aaacccaat tgaaattgaa aaaccagaaa atcaagatat catcttgctt 960
aatctaaag gatataaaga taaattcaag ttaataaata aagaagaaga tcaagtagaa 1020
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gaagatgttt atatggcaaa agcggaaacaa atgactgcaa catttctatt tggagtagga 1260
atcactttta ctattggaag ctttatctca ttaataactc atttagtaga atatattaaa 1320
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<210> 573

<211> 490

<212> PRT

<213> Homo sapiens

<400> 573

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			20				25						30		
Phe	Glu	Asn	Glu	Asn	Asp	Leu	Lys	Thr	Ala	Asn	Glu	Tyr	Ile	Asn	Ser
		35					40					45			
Leu	Gly	Tyr	Lys	Thr	Ile	Ser	Glu	Tyr	Thr	Thr	Lys	Ile	Asp	Ile	Leu
	50					55					60				
Asp	Phe	Pro	Glu	Asn	Lys	Glu	Ile	Thr	Ile	Asn	Glu	Ile	Asn	Lys	Leu
65					70					75					80
Asn	Asn	Leu	Asp	Leu	Arg	Lys	Ser	Ile	Phe	Leu	Lys	Lys	Leu	Ser	Asn
				85					90					95	
Leu	Phe	Asn	Ile	Glu	His	Lys	Lys	Leu	Leu	Tyr	Val	Glu	Asn	Arg	Phe
		100						105					110		
Lys	Ser	Ile	Asn	Phe	Lys	Asn	Leu	Lys	Lys	Glu	Leu	Asn	Ile	Asn	Ala
		115					120					125			
Asp	Ile	His	Ser	Leu	Asp	Tyr	Lys	Thr	Lys	Ile	Asn	Phe	Ile	Ser	Ser
	130					135					140				
Ile	Ile	Phe	Leu	Ile	Ile	Ile	Ile	Leu	Leu	Ile	Phe	Leu	Asp	Pro	Thr
145					150					155					160
Asn	Ser	Ile	Phe	Thr	Leu	Ile	Phe	Leu	Leu	Ile	Ser	Ser	Leu	Ala	Phe
				165					170					175	
Met	Ile	Ser	Lys	Glu	Ile	Met	Tyr	Phe	Tyr	Pro	Phe	Thr	Val	Leu	Ser
			180					185					190		
Tyr	Leu	Leu	Phe	Leu	Ile	Ile	Ser	Asn	Phe	Asn	Lys	Asn	Tyr	Asn	Lys
		195					200					205			
Ile	Tyr	Leu	Lys	Glu	Ile	Asn	Phe	Leu	Thr	Leu	Met	Thr	Lys	Ile	Lys
	210					215					220				
His	Leu	Leu	Phe	Leu	Phe	Thr	Phe	Thr	Ala	Leu	Tyr	Phe	Ile	Thr	Ile
225					230					235					240
Thr	Thr	Phe	Phe	Thr	Thr	Asn	Ile	Asp	Pro	Thr	Phe	Ile	Ala	Phe	Val
				245					250					255	
Ala	Ile	Pro	Thr	Leu	Cys	Ile	Phe	Leu	Ile	Phe	Ser	Trp	Ile	Lys	Thr
			260					265					270		
Glu	Ser	Asn	Phe	Lys	Asp	Thr	Phe	Leu	Phe	Pro	Ile	Glu	Ile	Lys	Glu
		275					280					285			
Lys	Lys	Ile	Glu	Gly	Lys	Lys	Ala	Leu	Lys	Ser	Lys	Ile	Ala	Ile	His
	290					295					300				

Leu Leu Leu Phe Thr Leu Ser Leu Ile Pro Phe Ala Tyr Ser Ser Tyr
 305 310 315 320

Met Leu Asn Ser Tyr Glu Asn Ile Asn Tyr Leu Tyr Ser Lys Lys Leu
 325 330 335

Asn Tyr Phe Asp Tyr Leu Asn Pro Asn Asn Ile Tyr Ile Met Leu Gly
 340 345 350

Tyr Asn Lys Asp Met Pro Asn Ile Ile Gly Tyr Leu Ser His Ile Leu
 355 360 365

Tyr Gln Asn Glu Leu Lys Tyr Asn Ile Thr Ala Lys Tyr Gly Lys Ile
 370 375 380

Pro Lys Asp Ile Lys Glu Asn Tyr Phe Glu Ile Lys Asn Asp Lys Ile
 385 390 395 400

Glu Ile His Pro Lys Thr Val Tyr Glu Val Asp Lys Ser Phe Ile Asp
 405 410 415

Glu Ile Leu Lys Lys Asp Leu Ala Ser Leu Phe Leu Lys Asn Lys Asn
 420 425 430

Pro Ile Leu Ile Tyr Lys Glu Asn Lys Asn Asn Ile Asn Thr Asp Lys
 435 440 445

Lys Asn Tyr Lys Ile Leu Phe Phe Phe Ser Leu Pro Phe Phe Val Leu
 450 455 460

Leu Phe Leu Phe Lys Ala Ile Arg Phe Thr Ile Leu Leu Asn Ile Asn
 465 470 475 480

Glu Lys Thr Tyr Lys Lys Tyr Ile Gln Gly
 485 490

<210> 574

<211> 471

<212> PRT

<213> Homo sapiens

<400> 574

Cys Asp Ala Ala Gln Phe Gly Asp Tyr Lys Pro Leu Tyr Phe Glu Asn
 1 5 10 15

Glu Asn Asp Leu Lys Thr Ala Asn Glu Tyr Ile Asn Ser Leu Gly Tyr
 20 25 30

Lys Thr Ile Ser Glu Tyr Thr Thr Lys Ile Asp Ile Leu Asp Phe Pro
 35 40 45

Glu Asn Lys Glu Ile Thr Ile Asn Glu Ile Asn Lys Leu Asn Asn Leu
 50 55 60

Asp Leu Arg Lys Ser Ile Phe Leu Lys Lys Leu Ser Asn Leu Phe Asn
 65 70 75 80

Ile Glu His Lys Lys Leu Leu Tyr Val Glu Asn Arg Phe Lys Ser Ile
 85 90 95

Asn Phe Lys Asn Leu Lys Lys Glu Leu Asn Ile Asn Ala Asp Ile His
 100 105 110
 Ser Leu Asp Tyr Lys Thr Lys Ile Asn Phe Ile Ser Ser Ile Ile Phe
 115 120 125
 Leu Ile Ile Ile Ile Leu Leu Ile Phe Leu Asp Pro Thr Asn Ser Ile
 130 135 140
 Phe Thr Leu Ile Phe Leu Leu Ile Ser Ser Leu Ala Phe Met Ile Ser
 145 150 155 160
 Lys Glu Ile Met Tyr Phe Tyr Pro Phe Thr Val Leu Ser Tyr Leu Leu
 165 170 175
 Phe Leu Ile Ile Ser Asn Phe Asn Lys Asn Tyr Asn Lys Ile Tyr Leu
 180 185 190
 Lys Glu Ile Asn Phe Leu Thr Leu Met Thr Lys Ile Lys His Leu Leu
 195 200 205
 Phe Leu Phe Thr Phe Thr Ala Leu Tyr Phe Ile Thr Ile Thr Thr Phe
 210 215 220
 Phe Thr Thr Asn Ile Asp Pro Thr Phe Ile Ala Phe Val Ala Ile Pro
 225 230 235 240
 Thr Leu Cys Ile Phe Leu Ile Phe Ser Trp Ile Lys Thr Glu Ser Asn
 245 250 255
 Phe Lys Asp Thr Phe Leu Phe Pro Ile Glu Ile Lys Glu Lys Lys Ile
 260 265 270
 Glu Gly Lys Lys Ala Leu Lys Ser Lys Ile Ala Ile His Leu Leu Leu
 275 280 285
 Phe Thr Leu Ser Leu Ile Pro Phe Ala Tyr Ser Ser Tyr Met Leu Asn
 290 295 300
 Ser Tyr Glu Asn Ile Asn Tyr Leu Tyr Ser Lys Lys Leu Asn Tyr Phe
 305 310 315 320
 Asp Tyr Leu Asn Pro Asn Asn Ile Tyr Ile Met Leu Gly Tyr Asn Lys
 325 330 335
 Asp Met Pro Asn Ile Ile Gly Tyr Leu Ser His Ile Leu Tyr Gln Asn
 340 345 350
 Glu Leu Lys Tyr Asn Ile Thr Ala Lys Tyr Gly Lys Ile Pro Lys Asp
 355 360 365
 Ile Lys Glu Asn Tyr Phe Glu Ile Lys Asn Asp Lys Ile Glu Ile His
 370 375 380
 Pro Lys Thr Val Tyr Glu Val Asp Lys Ser Phe Ile Asp Glu Ile Leu
 385 390 395 400
 Lys Lys Asp Leu Ala Ser Leu Phe Leu Lys Asn Lys Asn Pro Ile Leu
 405 410 415

Ile Tyr Lys Glu Asn Lys Asn Asn Ile Asn Thr Asp Lys Lys Asn Tyr
 420 425 430

Lys Ile Leu Phe Phe Phe Ser Leu Pro Phe Phe Val Leu Leu Phe Leu
 435 440 445

Phe Lys Ala Ile Arg Phe Thr Ile Leu Leu Asn Ile Asn Glu Lys Thr
 450 455 460

Tyr Lys Lys Tyr Ile Gln Gly
 465 470

<210> 575
 <211> 1473
 <212> DNA
 <213> Homo sapiens

<400> 575
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 gatgcagctc aatttggaga ctacaaacct ttatactttg aaaatgaaaa tgatctaaaa 120
 actgccaatg aatatataaa ttcactagga tacaaaacaa tctcagaata cacaacaaaa 180
 attgacattt tagactttcc cgaaaataaa gaaatcacaa taaatgagat aaacaaactt 240
 aacaatcttg acctgagaaa aagcatatatt ttaaaaaagc tctccaatct tttcaacata 300
 gagcacaaaa aacttcttta tgttgaaaac aggtttaaaa gtataaattt taaaaaccta 360
 aaaaaagaac tcaatattaa tgccgacata cattctcttg actacaaaac aaaaattaat 420
 tttatttcaa gcataatatt tctaatacata ataattttat taattttttt agacccaaca 480
 aactctatat ttactttaat ttttctatta atttcctctc ttgcttttat gataagcaaa 540
 gaaataatgt atttttatcc atttacagtt ctctcttatt tgttattttt aataatcagt 600
 aattttaaca aaaattacaa taaaatatat ttaaaagaaa taaatttttt aacactaatg 660
 acaaaaataa aacacttact atttttatatt acattcacag ctctatatatt cattacaatc 720
 acaacctttt ttactacaaa tattgatccc acttttattg catttgctgc aataccaacc 780
 ctttgcattt tcttaatttt cagctggata aaacagaaa gcaattttta agacactttc 840
 ttattcccaa tcgagattaa agagaaaaaa atagaaggaa aaaaagcttt aaaatcaaaa 900
 atagcaatac atctactact atttacactc tcattaattc ctttcgctta ttcaagctat 960
 atgctaattt cttatgaaaa cattaactac ctttacagta aaaaatttaa ttactttgat 1020
 tatttaaatc ctaataacat ttatataatg ctgggataca acaaagacat gcccaatatt 1080
 ataggggtacc tatcccatc tctttatcaa aacgaactaa aatacaatat taccgctaag 1140
 tatggaaaaa ttcttaaga tataaaagaa aattactttg aaatcaaaaa cgacaaaata 1200
 gaaattcatc ctaaaactgt ttacgaagta gacaaatcat ttattgatga aattcttaaa 1260
 aaagatcttg caagtctgtt tttaaaaaat aaaaatccaa tcctaataata taagaaaaac 1320
 aagaataata tcaacacaga taaaaaaaat tacaaaatac ttttcttttt ctctttgccc 1380
 ttctttgtat tactattcct atttaaagca ataagattta caattctttt aaacataaat 1440
 gaaaaaacct ataaaaaata tattcaagga taa 1473

<210> 576
 <211> 1416
 <212> DNA
 <213> Homo sapiens

<400> 576
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 aaaactgcc aatgaatat aaattcacta ggatacaaaa caatctcaga atacacaaca 120
 aaaattgaca ttttagactt tcccgaaaat aaagaaatca caataaatga gataaacaaa 180
 cttaacaatc ttgacctgag aaaaagcata tttttaaaaa agctctccaa tcttttcaac 240
 atagagcaca aaaaacttct ttatgttgaa aacaggttta aaagtataaa ttttaaaaac 300
 ctaaaaaaag aactcaatat taatgccgac atacattctc ttgactacaa aacaaaaatt 360
 aattttatct caagcataat atttctaata ataataattt tattaatttt tttagacca 420
 acaaaactcta tatttacttt aattttttcta ttaatttcat ctcttgcttt tatgataagc 480
 aaagaaataa tgtattttta tccatttaca gttctctctt atttgttatt ttttaataatc 540
 agtaatttta acaaaaatta caataaaata tatttaaaag aaataaattt ttttaacacta 600

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atgacaaaaa taaaacactt actatTTTTtTt tttacattca cagctctata tttcattaca 660
atcacaaact tttttactac aaatattgat ccctcttTTtTt ttgcatttgt cgcaatacca 720
acccttttgc ttttcttaat tttcagctgg ataaaaaacag aaagcaattt taaagacact 780
ttcttattcc caatcgagat taaagagaaa aaaatagaag gaaaaaaaagc tttaaaatca 840
aaaatagcaa tacatctact actatTTtTtTt ctctcattaa ttccttttcgc ttattcaagc 900
tatatgctaa attcttatga aaacattaac tacctTTtTtTt gtaaaaaatt aaattacttt 960
gattatttaa atcctaataa catttatata atgctgggat acaacaaaga catgcccaat 1020
attatagggT acctatccca cattctttat caaaacgaac taaaatacaa tattaccgct 1080
aagtatggaa aaattcctaa agatataaaa gaaaattact ttgaaatcaa aaacgacaaa 1140
atagaaattc atcctaaaac tgTTtTtTtTt gtagacaaat catttattga tgaaattctt 1200
aaaaaagatc ttgcaagtct gtttttTtTtTt aataaaaaatc caatcctaata atataaaagaa 1260
aacaagaata atatcaacac agataaaaaa aattacaaaaa tactttttctt tttctctttg 1320
cccttctttg tattactatt cctatTTtTtTt gcaataagat ttacaattct tttaaacata 1380
aatgaaaaaa cctataaaaa atatattcaa ggataa 1416

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<210> 577
 <211> 153
 <212> PRT
 <213> Homo sapiens

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<400> 577
Met Ile Arg Ala Leu Leu Thr Asn Asp Leu Phe Leu Ser Cys Leu Val
  1              5              10              15
Ser Gly Ile Ser Ala Gln Val Ile Lys Tyr Gly Ile Gln Thr Val Lys
      20              25              30
Thr Arg Lys Leu Lys Leu Thr Pro Val His Leu Leu Lys Lys Ile Phe
      35              40              45
Leu Glu Thr Gly Gly Met Pro Ser Ser His Ser Ser Thr Val Thr Ala
      50              55              60
Leu Ser Thr Ser Ile Ala Leu Thr Glu Gly Ile Asp Thr Asn Phe Ile
      65              70              75              80
Ile Ala Leu Ala Phe Ala Leu Ile Thr Ile Arg Asp Ser Phe Gly Val
      85              90              95
Arg Tyr Met Ser Gly Val Gln Ala Glu Tyr Leu Asn Ala Leu Ser Glu
      100             105             110
Lys Leu Lys Lys Glu Ile Lys Ile Asp Thr Thr Lys Ile Lys Val Val
      115             120             125
Lys Gly His Lys Lys Lys Glu Val Leu Thr Gly Ile Ile Ile Gly Ile
      130             135             140
Val Ser Ala Tyr Ile Val Cys Tyr Phe
      145             150

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<210> 578
 <211> 133
 <212> PRT
 <213> Homo sapiens

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<400> 578
Ala Gln Val Ile Lys Tyr Gly Ile Gln Thr Val Lys Thr Arg Lys Leu
  1              5              10              15

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Lys Leu Thr Pro Val His Leu Leu Lys Lys Ile Phe Leu Glu Thr Gly
 20 25 30
 Gly Met Pro Ser Ser His Ser Ser Thr Val Thr Ala Leu Ser Thr Ser
 35 40 45
 Ile Ala Leu Thr Glu Gly Ile Asp Thr Asn Phe Ile Ile Ala Leu Ala
 50 55 60
 Phe Ala Leu Ile Thr Ile Arg Asp Ser Phe Gly Val Arg Tyr Met Ser
 65 70 75 80
 Gly Val Gln Ala Glu Tyr Leu Asn Ala Leu Ser Glu Lys Leu Lys Lys
 85 90 95
 Glu Ile Lys Ile Asp Thr Thr Lys Ile Lys Val Val Lys Gly His Lys
 100 105 110
 Lys Lys Glu Val Leu Thr Gly Ile Ile Ile Gly Ile Val Ser Ala Tyr
 115 120 125
 Ile Val Cys Tyr Phe
 130

<210> 579
 <211> 462
 <212> DNA
 <213> Homo sapiens

<400> 579
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 gctcaagtga ttaaataatgg tatccaaact gtaaaaacaa gaaagttaaa actaactcca 120
 gtacatcttt taaaaaaaaat ttttctagaa acaggaggca tgccaagtag tcattcatca 180
 acggtcaccg ctctttcaac ctcaatcgca ctaactgaag gaatagatac aaattttata 240
 atagctcttg catttgccct tattacaata agagattctt tcggcgtaag atatatgtct 300
 ggagttcaag cagaatattt aaatgcatta tcagaaaaat taaaaaaaga aataaaaatt 360
 gacacaacaa aaataaaagt ggtcaagggg cacaaaaaga aagaggttct aacgggcata 420
 ataataggaa tagtctctgc gtatattgtg tgctattttt ag 462

<210> 580
 <211> 402
 <212> DNA
 <213> Homo sapiens

<400> 580
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 gtacatcttt taaaaaaaaat ttttctagaa acaggaggca tgccaagtag tcattcatca 120
 acggtcaccg ctctttcaac ctcaatcgca ctaactgaag gaatagatac aaattttata 180
 atagctcttg catttgccct tattacaata agagattctt tcggcgtaag atatatgtct 240
 ggagttcaag cagaatattt aaatgcatta tcagaaaaat taaaaaaaga aataaaaatt 300
 gacacaacaa aaataaaagt ggtcaagggg cacaaaaaga aagaggttct aacgggcata 360
 ataataggaa tagtctctgc gtatattgtg tgctattttt ag 402

<210> 581
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 581
 Met Tyr Ile Gly Ala Ala Gly Lys Ser Phe Ser Ile Ile Ile Asp Ser

1 5 10 15
 Ala Phe Leu Ser Asn Cys Phe Leu Phe Ile Gly Ser Phe Ser Arg Ser
 20 25 30
 Asp Ser Leu Met Ser Leu Ser Asn Ser Arg Phe Glu Tyr Pro Tyr Asp
 35 40 45
 Ala Ser Cys Glu Phe Ser Leu Val Asn Ile Val Lys Tyr Val Cys Gly
 50 55 60
 Ser Lys Tyr Ser Pro Met Arg Pro Thr Leu Ile Ile Ser Lys Leu Pro
 65 70 75 80
 Val Phe Leu Leu Leu Val Arg Thr Gly Gln Phe Ser Leu Val Ser Ile
 85 90 95
 Arg Leu Ile Phe Arg Ile Phe Phe His Trp Phe
 100 105

<210> 582
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 582
 Cys Phe Leu Phe Ile Gly Ser Phe Ser Arg Ser Asp Ser Leu Met Ser
 1 5 10 15
 Leu Ser Asn Ser Arg Phe Glu Tyr Pro Tyr Asp Ala Ser Cys Glu Phe
 20 25 30
 Ser Leu Val Asn Ile Val Lys Tyr Val Cys Gly Ser Lys Tyr Ser Pro
 35 40 45
 Met Arg Pro Thr Leu Ile Ile Ser Lys Leu Pro Val Phe Leu Leu Leu
 50 55 60
 Val Arg Thr Gly Gln Phe Ser Leu Val Ser Ile Arg Leu Ile Phe Arg
 65 70 75 80
 Ile Phe Phe His Trp Phe
 85

<210> 583
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 583
 atgtatattg gtgcagcagg aaaatctttt tcaattatta ttgattctgc ttttctgagt 60
 aattgttttc tttttatagg atctttttca agatctgatt ctctgatgag tttgtcaaag 120
 tctaggtttg aatatccgta tgatgcaagt tgtgaatttt ctcttgtaa tatagtaaag 180
 tatgtgtgtg gatctaaata ttccccaatg cgtccaactc ttattatttc aaaattgcca 240
 gtatttctgc tgttggttaag aacaggccaa ttttcgttgg taagcataag attgatattt 300
 agaatttttt tccattgggt ttga 324

<210> 584
 <211> 261
 <212> DNA

<213> Homo sapiens

<400> 584

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tgttttcttt ttataggatc tttttcaaga tctgattctc tgatgagttt gtcaaattct 60
aggtttgaat atccgtatga tgcaagttgt gaattttctc ttgtgaatat agtaaagtat 120
gtgtgtggat ctaaattatc cccaatgcgt ccaactctta ttatttcaaa attgccagta 180
tttctgctgt tggtagaac aggccaattt tcgttggtaa gcataagatt gatatttaga 240
atttttttcc attggttttg a 261
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<210> 585

<211> 528

<212> PRT

<213> Homo sapiens

<400> 585

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Met Lys Leu Gln Arg Ser Leu Phe Leu Ile Ile Phe Phe Leu Thr Phe
  1              5              10              15

Leu Cys Cys Asn Asn Lys Glu Arg Lys Glu Gly Val Ser Phe Lys Ile
      20              25              30

Ser Leu Gly Ala Glu Pro Ser Ser Leu Asp Pro Gln Leu Ala Glu Asp
      35              40              45

Asn Val Ala Ser Lys Met Ile Asp Thr Met Phe Arg Gly Ile Val Thr
      50              55              60

Gly Asp Pro Asn Thr Gly Gly Asn Lys Pro Gly Leu Ala Lys Gly Trp
      65              70              75              80

Asp Ile Ser Ser Asp Gly Thr Val Tyr Thr Phe Asn Leu Arg Glu Lys
      85              90              95

Ile Thr Trp Ser Asp Gly Val Ala Ile Thr Ala Glu Gly Ile Arg Lys
      100             105             110

Ser Tyr Leu Arg Ile Leu Asn Lys Glu Thr Gly Ser Lys Tyr Val Glu
      115             120             125

Met Val Lys Ser Val Ile Lys Asn Gly Gln Lys Tyr Phe Asp Gly Gln
      130             135             140

Val Thr Asp Ser Glu Leu Gly Ile Arg Ala Ile Asp Glu Lys Thr Leu
      145             150             155             160

Glu Ile Thr Leu Glu Ser Pro Lys Pro Tyr Phe Ile Asp Met Leu Val
      165             170             175

His Gln Ser Phe Ile Pro Val Pro Val His Val Thr Glu Lys Tyr Gly
      180             185             190

Gln Asn Trp Thr Ser Pro Glu Asn Met Val Thr Ser Gly Pro Phe Lys
      195             200             205

Leu Lys Glu Arg Ile Pro Asn Glu Lys Tyr Val Phe Glu Lys Asn Asn
      210             215             220

Lys Tyr Tyr Asp Ser Asn Glu Val Glu Leu Glu Glu Ile Thr Phe Tyr
      225             230             235             240
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Thr Thr Asn Asp Ser Ser Thr Ala Tyr Lys Met Tyr Glu Asn Glu Glu
 245 250 255
 Leu Asp Ala Ile Phe Gly Ser Ile Pro Pro Asp Leu Ile Lys Asn Leu
 260 265 270
 Lys Leu Arg Ser Asp Tyr Tyr Ser Ser Ala Val Asn Ala Ile Tyr Phe
 275 280 285
 Tyr Ala Phe Asn Thr His Ile Lys Pro Leu Asp Asn Val Lys Ile Arg
 290 295 300
 Lys Ala Leu Thr Leu Ala Ile Asp Arg Glu Thr Leu Thr Tyr Lys Val
 305 310 315 320
 Leu Asp Asn Gly Thr Thr Pro Thr Arg Arg Ala Thr Pro Asn Phe Ser
 325 330 335
 Ser Tyr Ser Tyr Ala Lys Ser Leu Glu Leu Phe Asn Pro Glu Ile Ala
 340 345 350
 Lys Thr Leu Leu Ala Glu Ala Gly Tyr Pro Asn Gly Asn Gly Phe Pro
 355 360 365
 Ile Leu Lys Leu Lys Tyr Asn Thr Asn Glu Ala Asn Lys Lys Ile Cys
 370 375 380
 Glu Phe Ile Gln Asn Gln Trp Lys Lys Asn Leu Asn Ile Asp Val Glu
 385 390 395 400
 Leu Glu Asn Glu Glu Trp Thr Thr Tyr Leu Asn Thr Lys Ala Asn Gly
 405 410 415
 Asn Tyr Glu Ile Ala Arg Ala Gly Trp Ile Gly Asp Tyr Ala Asp Pro
 420 425 430
 Leu Thr Phe Leu Ser Ile Phe Thr Gln Gly Tyr Thr Gln Phe Ser Ser
 435 440 445
 His Asn Tyr Ser Asn Pro Glu Tyr Asn Glu Leu Ile Lys Lys Ser Asp
 450 455 460
 Leu Glu Leu Asp Pro Ile Lys Arg Gln Asp Ile Leu Arg Gln Ala Glu
 465 470 475 480
 Glu Ile Ile Ile Glu Lys Asp Phe Pro Ile Ala Pro Ile Tyr Ile Tyr
 485 490 495
 Gly Asn Ser Tyr Leu Phe Arg Asn Asp Lys Trp Thr Gly Trp Asn Thr
 500 505 510
 Asn Ile Leu Glu Arg Phe Asp Leu Ser Gln Leu Lys Leu Lys Asn Lys
 515 520 525

<210> 586

<211> 511

<212> PRT

<213> Homo sapiens

<400> 586

Cys Cys Asn Asn Lys Glu Arg Lys Glu Gly Val Ser Phe Lys Ile Ser
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Leu Gly Ala Glu Pro Ser Ser Leu Asp Pro Gln Leu Ala Glu Asp Asn
20 25 30
Val Ala Ser Lys Met Ile Asp Thr Met Phe Arg Gly Ile Val Thr Gly
35 40 45
Asp Pro Asn Thr Gly Gly Asn Lys Pro Gly Leu Ala Lys Gly Trp Asp
50 55 60
Ile Ser Ser Asp Gly Thr Val Tyr Thr Phe Asn Leu Arg Glu Lys Ile
65 70 75 80
Thr Trp Ser Asp Gly Val Ala Ile Thr Ala Glu Gly Ile Arg Lys Ser
85 90 95
Tyr Leu Arg Ile Leu Asn Lys Glu Thr Gly Ser Lys Tyr Val Glu Met
100 105 110
Val Lys Ser Val Ile Lys Asn Gly Gln Lys Tyr Phe Asp Gly Gln Val
115 120 125
Thr Asp Ser Glu Leu Gly Ile Arg Ala Ile Asp Glu Lys Thr Leu Glu
130 135 140
Ile Thr Leu Glu Ser Pro Lys Pro Tyr Phe Ile Asp Met Leu Val His
145 150 155 160
Gln Ser Phe Ile Pro Val Pro Val His Val Thr Glu Lys Tyr Gly Gln
165 170 175
Asn Trp Thr Ser Pro Glu Asn Met Val Thr Ser Gly Pro Phe Lys Leu
180 185 190
Lys Glu Arg Ile Pro Asn Glu Lys Tyr Val Phe Glu Lys Asn Asn Lys
195 200 205
Tyr Tyr Asp Ser Asn Glu Val Glu Leu Glu Glu Ile Thr Phe Tyr Thr
210 215 220
Thr Asn Asp Ser Ser Thr Ala Tyr Lys Met Tyr Glu Asn Glu Glu Leu
225 230 235 240
Asp Ala Ile Phe Gly Ser Ile Pro Pro Asp Leu Ile Lys Asn Leu Lys
245 250 255
Leu Arg Ser Asp Tyr Tyr Ser Ser Ala Val Asn Ala Ile Tyr Phe Tyr
260 265 270
Ala Phe Asn Thr His Ile Lys Pro Leu Asp Asn Val Lys Ile Arg Lys
275 280 285
Ala Leu Thr Leu Ala Ile Asp Arg Glu Thr Leu Thr Tyr Lys Val Leu
290 295 300
Asp Asn Gly Thr Thr Pro Thr Arg Arg Ala Thr Pro Asn Phe Ser Ser
305 310 315 320

Tyr Ser Tyr Ala Lys Ser Leu Glu Leu Phe Asn Pro Glu Ile Ala Lys
 325 330 335
 Thr Leu Leu Ala Glu Ala Gly Tyr Pro Asn Gly Asn Gly Phe Pro Ile
 340 345 350
 Leu Lys Leu Lys Tyr Asn Thr Asn Glu Ala Asn Lys Lys Ile Cys Glu
 355 360 365
 Phe Ile Gln Asn Gln Trp Lys Lys Asn Leu Asn Ile Asp Val Glu Leu
 370 375 380
 Glu Asn Glu Glu Trp Thr Thr Tyr Leu Asn Thr Lys Ala Asn Gly Asn
 385 390 395 400
 Tyr Glu Ile Ala Arg Ala Gly Trp Ile Gly Asp Tyr Ala Asp Pro Leu
 405 410 415
 Thr Phe Leu Ser Ile Phe Thr Gln Gly Tyr Thr Gln Phe Ser Ser His
 420 425 430
 Asn Tyr Ser Asn Pro Glu Tyr Asn Glu Leu Ile Lys Lys Ser Asp Leu
 435 440 445
 Glu Leu Asp Pro Ile Lys Arg Gln Asp Ile Leu Arg Gln Ala Glu Glu
 450 455 460
 Ile Ile Ile Glu Lys Asp Phe Pro Ile Ala Pro Ile Tyr Ile Tyr Gly
 465 470 475 480
 Asn Ser Tyr Leu Phe Arg Asn Asp Lys Trp Thr Gly Trp Asn Thr Asn
 485 490 495
 Ile Leu Glu Arg Phe Asp Leu Ser Gln Leu Lys Leu Lys Asn Lys
 500 505 510

<210> 587

<211> 1587

<212> DNA

<213> Homo sapiens

<400> 587

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 cttgaccctc aattagcaga ggataatgtc gcatcaaaaa tgattgacac aatgttttaga 180
 gggattgtta caggagatcc taatacaggg ggaaataaac cgggacttgc aaaaggggtgg 240
 gatatttctt ctgatggaac agtttacaca tttaacctaa gagaaaaaat cacttggagt 300
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 gaaactggct caaagtacgt tgaaatggtt aaatcggtta ttaaaaatgg tcaaaaatat 420
 tttgatggac aagtgactga ctctgaactt ggaattagag cgattgatga aaaaacatta 480
 gaaataacac tggaatcacc aaaaccttat tttattgata tgtagtagaca ccaatcattt 540
 attccagtag cagttcatgt taccgaaaag tatggacaaa actggacaag ccccgaaaac 600
 atgggtgacaa gtggtccttt taaattaaaa gaaagaattc ctaacgaaaa atatgtcttt 660
 gaaaaaaata acaataacta cgactcaaat gaagtagaat tagaagagat tacattttac 720
 acaacaaatg acagctcaac agcgtataaa atgtatgaaa atgaagagct agatgcaatt 780
 tttggttcca taccgccaga tctaataaaa aatctaaaaa taagaagcga ctattactca 840
 tcagctgtta atgcatata cttttacgcg ttcaatacac acatcaaacc acttgacaac 900
 gttaaaatta gaaaagcctt aactcttgct attgacagag aaacgcttac atataaagtt 960
 cttgacaacg ggactacccc tacaagaaga gcaactccca acttttagttc atattcttat 1020
 gcaaaaagtt tagaattatt taatcctgaa attgcaaaaa cccttctagc tgaagctgga 1080

tatccta	atg	gcaatgg	att	tccaatttta	aaattaaaa	acaatacaaaa	cgaagcaa	at	1140
aaaaaa	at	gtgaatt	ttat	tcaaaaccaa	tggaaaaaaa	atttaa	atat	tgatgtgg	1200
cttgaaa	acg	aagaatgg	ac	aacatactta	aacactaagg	caa	atggaaa	ttatgaa	1260
gcaagag	cag	gatggat	agg	cgattatg	ct	gatcctttg	a	cattttta	1320
caaggata	ca	cacaatt	ctc	atctcata	at	tactcaa	acc	cagaata	1380
aagaaat	ccg	accttgag	ct	tgatcca	ata	aaaagaca	ag	acatttt	1440
gagataa	ttg	aaaaa	aga	ttttcca	ata	gcacca	atat	acatat	1500
cttttcag	aa	atgacaa	atg	gacagggt	gg	aacacca	ata	ttttaga	1560
tctcagct	aa	aattaaaa	aa	tataa					1587

<210> 588
 <211> 1536
 <212> DNA
 <213> Homo sapiens

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ccaagcag	tc	ttgaccct	ca	attagcag	ag	gataatg	tcg	catcaaaa	at	gattgac	aca	120
atgtttag	ag	ggattgtt	ac	aggagat	cc	aatacagg	ggg	gaaataa	acc	gggactt	gca	180
aaaggg	tggg	atattt	cttc	tgatgga	aca	gtttaca	cat	ttaacct	aag	agaaaaa	atc	240
acttgga	gtg	acggagt	tgc	aatcact	gca	gaagga	atta	gaaaat	ctta	tcttaga	att	300
ttaaaata	aa	aaactgg	ctc	aaagtac	g	gaaatgg	tta	aatcggt	a	taaaaat	gg	360
caaaaa	atatt	ttgatgg	aca	agtga	ctgac	tctga	acttg	gaattag	agc	gattgat	gaa	420
aaaacatt	ag	aaataac	act	ggaatc	acca	aaacctt	at	ttattga	tat	gttagt	acac	480
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 <212> PRT
 <213> Homo sapiens

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 Asn Asn Phe Ile Lys Ala His Ser Lys Glu Phe Asp Leu Asn Asn Leu
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 Asn Trp Leu Trp Asn Phe Asp Tyr Thr Lys Lys Asn Phe Asp Lys His
 50 55 60

Phe Asn Ile Asp Pro Ser Ser Tyr Ile Tyr Val Ala Tyr Leu Phe Lys
65 70 75 80
Lys Ile Gly Phe Glu Glu Lys Phe Val Glu Tyr Met Lys Lys Ala Ile
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Ala Asn Gly Asp Ser Ile Ala Ser Gln Phe Ala Gly Ile Lys Leu Ile
100 105 110
Glu Tyr Phe Asn Ser Ala Lys Glu Tyr Phe Ala Ser Glu Leu Ile Gly
115 120 125
Glu Lys Leu Tyr Lys Lys Tyr Glu Asn Asn Lys Phe Ile Ile Leu Gly
130 135 140
Tyr Phe Lys Ser Leu Tyr Trp Gln Lys Lys Asn Asp Lys Ala Leu Ser
145 150 155 160
Leu Leu Asn Lys Leu Asp Lys Met Lys Phe Ser Asp Tyr Gln Glu Asn
165 170 175
Glu Asn Ile Leu Leu Lys Ala Val Leu Tyr Leu Asn Leu Ser Asn Val
180 185 190
Ser Glu Ser Lys Ile Tyr Phe Asn Glu Leu Phe Glu Asn Leu Pro Ala
195 200 205
Asn Tyr Leu His Val Arg Ala Tyr Asp Tyr Phe Ile Ile Glu Asn Lys
210 215 220
Ser Arg Tyr Phe Gly Ala Asn Phe Leu Asn Leu Val Arg Phe Lys Tyr
225 230 235 240
Glu Val Ala Asn Gly Asn Phe Asn Gly Ala Ile Asn Ile Leu Asn Lys
245 250 255
Asn Gly Leu Asn Asp Tyr Tyr Asp Asn Asn Ile Val Leu Ser Asp Val
260 265 270
Tyr Lys Ala Phe Ile Ser Ser Gly Lys Val Ser Asn Ala Leu Thr Phe
275 280 285
Phe Ser Lys Ile Lys Ser Lys Tyr Lys Asn Tyr Tyr Leu Gly Ile Leu
290 295 300
Asn Leu Arg Glu Lys Asn Asn Leu Gly Leu Leu Leu Lys Glu Tyr
305 310 315 320
Leu Glu Gly Leu Asp Leu Asn Asn Glu Ile Asn Arg Leu Asp Leu Leu
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340 345 350
Phe Ala Glu Ser Leu Pro Lys Phe Tyr Thr Glu Gly Asp Lys Lys Asn
355 360 365
Ser Thr Phe Ile Lys Ile Leu Glu Glu Tyr Ile Leu Glu Ser Ile Gln
370 375 380

Leu Glu Asp Tyr Gly Asn Leu Tyr Lys Leu Tyr Ser Asn Ala Gln Lys
 385 390 395 400
 Val Ile Ser Asn Ser Val Leu Ser Lys Leu Ala Phe Ile Asn Ala Arg
 405 410 415
 Leu Ile Tyr His Lys Leu Ile Lys Pro Asn Val Ser Gly Glu Tyr Lys
 420 425 430
 Ser Leu Leu His Ser Ala Val Asn Tyr Asp Lys Trp Ser Tyr Ser Ser
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 Phe Met Ser Arg Tyr Leu Leu Asp Gln Asn Ile Asp Glu Phe Phe Thr
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 Gly Gly Ser Asp Ile Lys Tyr Glu Gln Ser Asp Tyr Glu Ile Phe Leu
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 Glu Gly Phe Leu Lys Phe Asn Leu Cys Asn Tyr Val Arg Gly Phe Ile
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 Ser Glu Asp Phe Arg Asn Gly Tyr Lys Phe Ser Leu Asp Phe Tyr Arg
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 Lys Val Tyr Asp Glu Leu Leu Lys Ser Glu Asn Tyr Tyr Asp Ala Thr
 515 520 525
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 Asn Asp Tyr Lys Arg Leu Tyr Pro Tyr Leu Tyr Gly Ser Leu Ile Glu
 545 550 555 560
 Tyr Trp Ala Lys Arg Arg Gly Leu Glu Ala Ser Val Val Phe Ser Leu
 565 570 575
 Ile Lys Ala Glu Ser Ser Phe Glu Lys Asn Ala Val Ser Lys Pro Gly
 580 585 590
 Ala Val Gly Leu Met Gln Val Met Pro Ser Thr Ala Asn Asp Ile Ser
 595 600 605
 Lys Glu Leu Lys Tyr Phe Asn Tyr Asp Leu Lys Ile Pro Lys Asp Asn
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 Ile Ile Ile Gly Thr Tyr Tyr Leu Lys Lys Arg Ile Ser Thr Thr Gly
 625 630 635 640
 Ser Leu Tyr Lys Ala Leu Ala Ser Tyr Asn Gly Gly Ile Gly Asn Val
 645 650 655
 Arg Lys Trp Glu Lys Ser Tyr Gly His Leu Ser Lys Glu Leu Phe Ile
 660 665 670
 Glu Ala Ile Pro Phe Ser Gln Thr Arg Asn Tyr Ile Lys Lys Ile Leu
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 Val Tyr Ser Val Phe Tyr Asp Ala Leu Tyr Glu Lys Lys Gly Ile Asp
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Ser Val Ile Val Lys Ile Met Gly Glu Phe Pro Lys Asn
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<210> 590
 <211> 694
 <212> PRT
 <213> Homo sapiens

<400> 590

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 Tyr Thr Lys Lys Asn Phe Asp Lys His Phe Asn Ile Asp Pro Ser Ser
 35 40 45
 Tyr Ile Tyr Val Ala Tyr Leu Phe Lys Lys Ile Gly Phe Glu Glu Lys
 50 55 60
 Phe Val Glu Tyr Met Lys Lys Ala Ile Ala Asn Gly Asp Ser Ile Ala
 65 70 75 80
 Ser Gln Phe Ala Gly Ile Lys Leu Ile Glu Tyr Phe Asn Ser Ala Lys
 85 90 95
 Glu Tyr Phe Ala Ser Glu Leu Ile Gly Glu Lys Leu Tyr Lys Lys Tyr
 100 105 110
 Glu Asn Asn Lys Phe Ile Ile Leu Gly Tyr Phe Lys Ser Leu Tyr Trp
 115 120 125
 Gln Lys Lys Asn Asp Lys Ala Leu Ser Leu Leu Asn Lys Leu Asp Lys
 130 135 140
 Met Lys Phe Ser Asp Tyr Gln Glu Asn Glu Asn Ile Leu Leu Lys Ala
 145 150 155 160
 Val Leu Tyr Leu Asn Leu Ser Asn Val Ser Glu Ser Lys Ile Tyr Phe
 165 170 175
 Asn Glu Leu Phe Glu Asn Leu Pro Ala Asn Tyr Leu His Val Arg Ala
 180 185 190
 Tyr Asp Tyr Phe Ile Ile Glu Asn Lys Ser Arg Tyr Phe Gly Ala Asn
 195 200 205
 Phe Leu Asn Leu Val Arg Phe Lys Tyr Glu Val Ala Asn Gly Asn Phe
 210 215 220
 Asn Gly Ala Ile Asn Ile Leu Asn Lys Asn Gly Leu Asn Asp Tyr Tyr
 225 230 235 240
 Asp Asn Asn Ile Val Leu Ser Asp Val Tyr Lys Ala Phe Ile Ser Ser
 245 250 255
 Gly Lys Val Ser Asn Ala Leu Thr Phe Phe Ser Lys Ile Lys Ser Lys
 260 265 270

Tyr Lys Asn Tyr Tyr Leu Gly Ile Leu Asn Leu Arg Glu Lys Asn Asn
 275 280 285
 Leu Gly Leu Leu Leu Leu Lys Glu Tyr Leu Glu Gly Leu Asp Leu Asn
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 Ile Phe Thr Lys Ser Ala Arg Asp Tyr Phe Ala Glu Ser Leu Pro Lys
 325 330 335
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 Glu Glu Tyr Ile Leu Glu Ser Ile Gln Leu Glu Asp Tyr Gly Asn Leu
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 Tyr Lys Leu Tyr Ser Asn Ala Gln Lys Val Ile Ser Asn Ser Val Leu
 370 375 380
 Ser Lys Leu Ala Phe Ile Asn Ala Arg Leu Ile Tyr His Lys Leu Ile
 385 390 395 400
 Lys Pro Asn Val Ser Gly Glu Tyr Lys Ser Leu Leu His Ser Ala Val
 405 410 415
 Asn Tyr Asp Lys Trp Ser Tyr Ser Ser Phe Met Ser Arg Tyr Leu Leu
 420 425 430
 Asp Gln Asn Ile Asp Glu Phe Phe Thr Gly Gly Ser Asp Ile Lys Tyr
 435 440 445
 Glu Gln Ser Asp Tyr Glu Ile Phe Leu Glu Gly Phe Leu Lys Phe Asn
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 Leu Cys Asn Tyr Val Arg Gly Phe Ile Ser Glu Asp Phe Arg Asn Gly
 465 470 475 480
 Tyr Lys Phe Ser Leu Asp Phe Tyr Arg Lys Val Tyr Asp Glu Leu Leu
 485 490 495
 Lys Ser Glu Asn Tyr Tyr Asp Ala Thr Leu Val Ile Asn Tyr Leu Val
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 Asn Gln Asp Glu Ser Ala Leu Met Glu Asn Asp Tyr Lys Arg Leu Tyr
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 Pro Tyr Leu Tyr Gly Ser Leu Ile Glu Tyr Trp Ala Lys Arg Arg Gly
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 545 550 555 560
 Glu Lys Asn Ala Val Ser Lys Pro Gly Ala Val Gly Leu Met Gln Val
 565 570 575
 Met Pro Ser Thr Ala Asn Asp Ile Ser Lys Glu Leu Lys Tyr Phe Asn
 580 585 590

Tyr Asp Leu Lys Ile Pro Lys Asp Asn Ile Ile Ile Gly Thr Tyr Tyr
595 600 605

Leu Lys Lys Arg Ile Ser Thr Thr Gly Ser Leu Tyr Lys Ala Leu Ala
610 615 620

Ser Tyr Asn Gly Gly Ile Gly Asn Val Arg Lys Trp Glu Lys Ser Tyr
625 630 635 640

Gly His Leu Ser Lys Glu Leu Phe Ile Glu Ala Ile Pro Phe Ser Gln
645 650 655

Thr Arg Asn Tyr Ile Lys Lys Ile Leu Val Tyr Ser Val Phe Tyr Asp
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Ala Leu Tyr Glu Lys Lys Gly Ile Asp Ser Val Ile Val Lys Ile Met
675 680 685

Gly Glu Phe Pro Lys Asn
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<210> 591

<211> 2154

<212> DNA

<213> Homo sapiens

<400> 591

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aggaattata ttaaaaaaat attagtttat tcggtatttt atgatgcttt gtatgaaaag 2100
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<210> 592

<211> 2085

<212> DNA

<213> Homo sapiens

<400> 592

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tttgaagaga aattttaga gtatatgaaa aaggccatag ctaatggaga tagcattgca 240
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gacaataaca ttgtattaag tgatgtttat aaggctttta ttagttctgg caaagtttca 780
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<210> 593

<211> 912

<212> DNA

<213> Homo sapiens

<400> 593

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caagaaaaag aaaaaagctt tactaaaaat tttggagaac ggaaatatga ggatttaatt 240
aatcctatag agcctataat accttcagaa tcaccaaaga ataaggctaa tataccaaat 300
atttcaattg cgcatactga aaaaaaagag acaaaaaagg agaatttaat cccttctact 360
aatgaagaaa aggaagctga tgcagcaatt aaatatttag aagaaaatat tcttaaaaaa 420

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tctaaatttt ctgaattaat tagagaagta cgtgtaatta aagatgaata tgctttaata 480
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aatcctaaga acaatagaga taagataaat aaattaacac aattggtgca aaataattta 600
aagatagata gtgaacttga gcagcttata aatatgattg atatggcaga aaatgaaata 660
agctctgcgg ctttcttttt tgacaacgct cagaaaaggt taaaagaaag cattattaaa 720
agattagaga gtaaaaaataa tagatcttat gcattaaaat tgtctagaca ggctttaagt 780
gacgcaagaa gtgctttaag taatttagaa tcttttgcct ctaaaagaat tgaaccaatg 840
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aataaaaaat aa 912

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<210> 594

<211> 841

<212> DNA

<213> Homo sapiens

<400> 594

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gcaaaaaagc tttactaaaa attttggaga acggaaatat gaggatttaa ttaatcctat 180
agagcctata ataccttcag aatcaccaaa gaataaggct aatataccaa atatttcaat 240
tgcgcatact gaaaaaaaaag agacaaaaaa ggagaattta atcccttcta ctaatgaaga 300
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gaacaataga gataagataa ataaattaac acaattgttg caaaataatt taaagataga 540
tagtgaactt gagcagctta taaatatgat tgatatggca gaaaatgaaa taagctctgc 600
ggctttcttt tttgacaacg ctcagaaaaag gttaaaaagaa agcattatta aaagattaga 660
gagtaaaaat aatagatctt atgcattaaa attgtctaga caggctttaa gtgacgcaag 720
aagtgtctta agtaatttag aatcttttgc ctctaaaaga attgaaccaa tggtgagaaa 780
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<210> 595

<211> 302

<212> PRT

<213> Homo sapiens

<400> 595

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Met Gly Gly Leu Met Ser Cys Asn Leu Asp Ser Lys Leu Ser Ser Asn
      20             25             30

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Lys Glu Gln Lys Asn Asn Asn Asn Val Lys Glu Val Ser Asp Ser Val
      35             40             45

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Gln Glu Asp Gly Leu Asn Asp Leu Tyr Asn Asn Gln Glu Lys Gln Lys
      50             55             60

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Ser Phe Thr Lys Asn Phe Gly Glu Arg Lys Tyr Glu Asp Leu Ile Asn
      65             70             75             80

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Pro Ile Glu Pro Ile Ile Pro Ser Glu Ser Pro Lys Asn Lys Ala Asn
      85             90             95

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Ile Pro Asn Ile Ser Ile Ala His Thr Glu Lys Lys Glu Thr Lys Lys
     100             105             110

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Glu Asn Leu Ile Pro Ser Thr Asn Glu Glu Lys Glu Ala Asp Ala Ala

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115					120					125						
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145					150					155					160	
Ala	Asp	Leu	Tyr	Asp	Val	Ile	Gly	Lys	Ile	Asn	Asn	Lys	Lys	Thr	Ser	
165					170					175						
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180					185					190						
Gln	Leu	Leu	Gln	Asn	Asn	Leu	Lys	Ile	Asp	Ser	Glu	Leu	Glu	Gln	Leu	
195					200					205						
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210					215					220						
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225					230					235					240	
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245					250					255						
Ala	Leu	Ser	Asp	Ala	Arg	Ser	Ala	Leu	Ser	Asn	Leu	Glu	Ser	Phe	Ala	
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Ser	Lys	Arg	Ile	Glu	Pro	Met	Val	Arg	Lys	Glu	Glu	Ile	Lys	Glu	Leu	
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<210> 596
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 596																
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Asn	Asn	Val	Lys	Glu	Val	Ser	Asp	Ser	Val	Gln	Glu	Asp	Gly	Leu	Asn	
20					25					30						
Asp	Leu	Tyr	Asn	Asn	Gln	Glu	Lys	Gln	Lys	Ser	Phe	Thr	Lys	Asn	Phe	
35					40					45						
Gly	Glu	Arg	Lys	Tyr	Glu	Asp	Leu	Ile	Asn	Pro	Ile	Glu	Pro	Ile	Ile	
50					55					60						
Pro	Ser	Glu	Ser	Pro	Lys	Asn	Lys	Ala	Asn	Ile	Pro	Asn	Ile	Ser	Ile	
65					70					75					80	
Ala	His	Thr	Glu	Lys	Lys	Glu	Thr	Lys	Lys	Glu	Asn	Leu	Ile	Pro	Ser	
85					90					95						
Thr	Asn	Glu	Glu	Lys	Glu	Ala	Asp	Ala	Ala	Ile	Lys	Tyr	Leu	Glu	Glu	

100	105	110
Asn Ile Leu Lys Asn Ser Lys Phe Ser Glu Leu Ile Arg Glu Val Arg 115 120 125		
Val Ile Lys Asp Glu Tyr Ala Leu Ile Lys Ala Asp Leu Tyr Asp Val 130 135 140		
Ile Gly Lys Ile Asn Asn Lys Lys Thr Ser Leu Met Glu Asn Pro Lys 145 150 155 160		
Asn Asn Arg Asp Lys Ile Asn Lys Leu Thr Gln Leu Leu Gln Asn Asn 165 170 175		
Leu Lys Ile Asp Ser Glu Leu Glu Gln Leu Ile Asn Met Ile Asp Met 180 185 190		
Ala Glu Asn Glu Ile Ser Ser Ala Ala Phe Phe Phe Asp Asn Ala Gln 195 200 205		
Lys Arg Leu Lys Glu Ser Ile Ile Lys Arg Leu Glu Ser Lys Asn Asn 210 215 220		
Arg Ser Tyr Ala Leu Lys Leu Ser Arg Gln Ala Leu Ser Asp Ala Arg 225 230 235 240		
Ser Ala Leu Ser Asn Leu Glu Ser Phe Ala Ser Lys Arg Ile Glu Pro 245 250 255		
Met Val Arg Lys Glu Glu Ile Lys Glu Leu Ile Lys His Ala Lys Thr 260 265 270		
Val Leu Glu Ser Leu Asn Lys Lys 275 280		

<210> 597
 <211> 714
 <212> DNA
 <213> Homo sapiens

<400> 597
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 acatctattg atcaagtatt agatgagata agtgaagcca caggcctaag ttcggaaaaa 180
 atcacaaaaa taactccgga agagctagaa aatttagcaa aggaagctca agatgactct 240
 gaaaaatcca aaaaagaaat tgaagatcaa aaaaatacca aggaaagtaa aaacatagaa 300
 gtaaaggata ctctcgcgtt aatcaaattg ataaagaatt catcagaaaa aattgattcg 360
 gtttttcaaa cactaattaa tatagggttat aatgctacct atgcagccaa aagtaatttg 420
 aagaatggac taaagatggt gaaattactg gatgagttgc taaaaatatac ggtaagtagc 480
 aatggtgata aaagtaccca aaaatacaat gaacttaaaa ccgttgtaaa taagttaa 540
 gctgaaaatt cggtaaagcgt ttctttttaa gaacattcaa acagtaaaat tgaaactaaa 600
 aaatgtattc aaactcttat gaaaaatgta gaaacatact ttgaaggtgt atgcagcgaa 660
 cttaaaaaca aaaatgatgg tgagtacgaa aaaacattga caactttaag ctaa 714

<210> 598
 <211> 634
 <212> DNA
 <213> Homo sapiens

<400> 598

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atgtaaattgg tatgtagaca ataccattga tgaagcaact gtagaaagta aatcagcact 60
aacatctatt gatcaagtat tagatgagat aagtgaagcc acaggcctaa gttcggaaaa 120
aatcacaaaa ttaactccgg aagagctaga aaatttagca aaggaagctc aagatgactc 180
tgaaaaatcc aaaaaagaaa ttgaagatca aaaaaatacc aaggaaagta aaaacataga 240
agtaaaggat actcctcgct taatcaaatt gataaagaat tcatcagaaa aaattgattc 300
ggtttttcaa acactaatta atataggtta taatgctacc tatgcagcca aaagtaattt 360
gaagaatgga cttaaagatgg tgaaattact ggatgagttg ctaaaaatat cggtaagtag 420
caatggtgat aaaagtaccc aaaaatacaa tgaacttaaa accggttgtaa ataagtttaa 480
tgctgaaaat tcggttaagcg tttcttttaa agaacattca aacagtaaaa ttgaaactaa 540
aaaatgtatt caaactctta tgaaaaatgt agaaacatac tttgaaggtg tatgcagcga 600
acttaaaaac aaaaatgatg gtgagtacga aaaa 634

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<210> 599

<211> 236

<212> PRT

<213> Homo sapiens

<400> 599

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Arg Ser Leu Gln Met Ser Lys Leu Ile Leu Ala Ile Ser Ile Leu Leu
  1                      5                      10                      15

Ile Ile Ser Cys Lys Trp Tyr Val Asp Asn Thr Ile Asp Glu Ala Thr
      20                      25                      30

Val Glu Ser Lys Ser Ala Leu Thr Ser Ile Asp Gln Val Leu Asp Glu
      35                      40                      45

Ile Ser Glu Ala Thr Gly Leu Ser Ser Glu Lys Ile Thr Lys Leu Thr
      50                      55                      60

Pro Glu Glu Leu Glu Asn Leu Ala Lys Glu Ala Gln Asp Asp Ser Glu
      65                      70                      75                      80

Lys Ser Lys Lys Glu Ile Glu Asp Gln Lys Asn Thr Lys Glu Ser Lys
      85                      90                      95

Asn Ile Glu Val Lys Asp Thr Pro Arg Leu Ile Lys Leu Ile Lys Asn
      100                      105                      110

Ser Ser Glu Lys Ile Asp Ser Val Phe Gln Thr Leu Ile Asn Ile Gly
      115                      120                      125

Tyr Asn Ala Thr Tyr Ala Ala Lys Ser Asn Leu Lys Asn Gly Leu Lys
      130                      135                      140

Met Val Lys Leu Leu Asp Glu Leu Leu Lys Ile Ser Val Ser Ser Asn
      145                      150                      155                      160

Gly Asp Lys Ser Thr Gln Lys Tyr Asn Glu Leu Lys Thr Val Val Asn
      165                      170                      175

Lys Phe Asn Ala Glu Asn Ser Val Ser Val Ser Phe Lys Glu His Ser
      180                      185                      190

Asn Ser Lys Ile Glu Thr Lys Lys Cys Ile Gln Thr Leu Met Lys Asn
      195                      200                      205

Val Glu Thr Tyr Phe Glu Gly Val Cys Ser Glu Leu Lys Asn Lys Asn
      210                      215                      220

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Asp Gly Glu Tyr Glu Lys Thr Leu Thr Thr Leu Ser
 225 230 235

<210> 600
 <211> 211
 <212> PRT
 <213> Homo sapiens

<400> 600
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 1 5 10 15
 Lys Ser Ala Leu Thr Ser Ile Asp Gln Val Leu Asp Glu Ile Ser Glu
 20 25 30
 Ala Thr Gly Leu Ser Ser Glu Lys Ile Thr Lys Leu Thr Pro Glu Glu
 35 40 45
 Leu Glu Asn Leu Ala Lys Glu Ala Gln Asp Asp Ser Glu Lys Ser Lys
 50 55 60
 Lys Glu Ile Glu Asp Gln Lys Asn Thr Lys Glu Ser Lys Asn Ile Glu
 65 70 75 80
 Val Lys Asp Thr Pro Arg Leu Ile Lys Leu Ile Lys Asn Ser Ser Glu
 85 90 95
 Lys Ile Asp Ser Val Phe Gln Thr Leu Ile Asn Ile Gly Tyr Asn Ala
 100 105 110
 Thr Tyr Ala Ala Lys Ser Asn Leu Lys Asn Gly Leu Lys Met Val Lys
 115 120 125
 Leu Leu Asp Glu Leu Leu Lys Ile Ser Val Ser Ser Asn Gly Asp Lys
 130 135 140
 Ser Thr Gln Lys Tyr Asn Glu Leu Lys Thr Val Val Asn Lys Phe Asn
 145 150 155 160
 Ala Glu Asn Ser Val Ser Val Ser Phe Lys Glu His Ser Asn Ser Lys
 165 170 175
 Ile Glu Thr Lys Lys Cys Ile Gln Thr Leu Met Lys Asn Val Glu Thr
 180 185 190
 Tyr Phe Glu Gly Val Cys Ser Glu Leu Lys Asn Lys Asn Asp Gly Glu
 195 200 205
 Tyr Glu Lys
 210

<210> 601
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 601
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 atgttaattt caataagttt attatcatgt gatgtagta gattaaatca gagaaatatt 120
 aatgagctta aaatttttgt tgaaaaggcc aagtattatt ctataaaatt agacgctatt 180

tataacgaat gtacaggagc atataatgat attatgactt attcggaagg tacattttct 240
 gatcaaagta aggttaatca agctatatct atatttataaa aagacaataa aattgttaat 300
 aagtttaagg agcttgaaaa gattatagaa gaatacaaac ctatgttttt aagtaaatta 360
 attgatgatt ttgcgggatc cggt 384

<210> 602

<211> 286

<212> DNA

<213> Homo sapiens

<400> 602

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 ggccaagtat tattctataa aattagacgc tatttataac gaatgtacag gagcatataa 120
 tgatattatg acttattcgg aagggtacatt ttctgatcaa agtaagggtta atcaagctat 180
 atctatattt aaaaaagaca ataaaattgt taataagttt aaggagcttg aaaagattat 240
 agaagaatac aaacctatgt ttttaagtaa attaattgat gatttt 286

<210> 603

<211> 127

<212> PRT

<213> Homo sapiens

<400> 603

Ile	Ser	Lys	Asp	Phe	Ser	Arg	Gly	Glu	Asn	Met	Lys	Lys	Ser	Phe	Leu
1				5					10					15	
Ser	Ile	Tyr	Met	Leu	Ile	Ser	Ile	Ser	Leu	Leu	Ser	Cys	Asp	Val	Ser
			20					25					30		
Arg	Leu	Asn	Gln	Arg	Asn	Ile	Asn	Glu	Leu	Lys	Ile	Phe	Val	Glu	Lys
		35					40					45			
Ala	Lys	Tyr	Tyr	Ser	Ile	Lys	Leu	Asp	Ala	Ile	Tyr	Asn	Glu	Cys	Thr
	50					55					60				
Gly	Ala	Tyr	Asn	Asp	Ile	Met	Thr	Tyr	Ser	Glu	Gly	Thr	Phe	Ser	Asp
65					70					75					80
Gln	Ser	Lys	Val	Asn	Gln	Ala	Ile	Ser	Ile	Phe	Lys	Lys	Asp	Asn	Lys
			85						90					95	
Ile	Val	Asn	Lys	Phe	Lys	Glu	Leu	Glu	Lys	Ile	Ile	Glu	Glu	Tyr	Lys
		100						105					110		
Pro	Met	Phe	Leu	Ser	Lys	Leu	Ile	Asp	Asp	Phe	Ala	Gly	Ser	Val	
	115						120					125			

<210> 604

<211> 95

<212> PRT

<213> Homo sapiens

<400> 604

Cys	Asp	Val	Ser	Arg	Leu	Asn	Gln	Arg	Asn	Ile	Asn	Glu	Leu	Lys	Ile
1					5					10				15	
Phe	Val	Glu	Lys	Ala	Lys	Tyr	Tyr	Ser	Ile	Lys	Leu	Asp	Ala	Ile	Tyr
			20					25					30		
Asn	Glu	Cys	Thr	Gly	Ala	Tyr	Asn	Asp	Ile	Met	Thr	Tyr	Ser	Glu	Gly

35 40 45
 Thr Phe Ser Asp Gln Ser Lys Val Asn Gln Ala Ile Ser Ile Phe Lys
 50 55 60
 Lys Asp Asn Lys Ile Val Asn Lys Phe Lys Glu Leu Glu Lys Ile Ile
 65 70 75 80
 Glu Glu Tyr Lys Pro Met Phe Leu Ser Lys Leu Ile Asp Asp Phe
 85 90 95

<210> 605
 <211> 783
 <212> DNA
 <213> Homo sapiens

<400> 605
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 ttgcttttga atgcttgcaa ttcagatttt agcactaatc aagaagatat taaatatcca 120
 tctgataaag agaaatcaaa atccaacatg gaagcaagct ctaaagaaga agatccaaat 180
 aaaaaataa aaaatacact gcttaatgat ttaataaatt tgatagaaat agctaattgag 240
 cataaagaaa aatatgaaaa aagaatgcaa gaagaacctt cagatcaata cggaatattg 300
 gctttccagg aattagactt gtccgttggg aaaaatatctg aagacacccc gcaatctaaa 360
 aaatttagaa aaaacacctt ttctccctta agcgctattg atgtcaataa attaaaagat 420
 ctttcagaga ttataagaaa ttcggggcaa atacaagggt tattttaatat tttcaacaga 480
 ttcggaggga tttttgacga ctacttaat cagctatatt ctaaaaaaga taccctaggg 540
 ggactagaaa ttttggattt agataaacta aaaaattcgt ttgaaaaatt actatctata 600
 aaagaaactt tctcaaaaat gctaaatcaa cttttattag attataaaaa tgataaagat 660
 catatacgaa cagagacaaa taaacttaaa tctcatacaa ctgcactttt cgaacaactt 720
 gataaaaaag aagacgaagc atatgaacct aaaaatcaga ttttttcaat aagtaacctt 780
 taa 783

<210> 606
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 606
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 atcaaaatcc aacatggaag caagctctaa agaagaagat ccaaataaaa aaataaaaaa 120
 tacactgctt aatgatttaa taaatttgat agaaatagct aatgagcata aagaaaaata 180
 tgaaaaaaga atgcaagaag aaccttcaga tcaatacgga atattggctt tccaggaatt 240
 agacttgctc gttggaaaaa tatctgaaga caccctcgaa tctaaaaaat ttagaaaaaa 300
 cacctattct cccttaagcg ctattgatgt caataaatta aaagatcttt cagagattat 360
 aagaaattcg ggccaaatac aagggtttatt taatatatttc aacagattcg gaggcatttt 420
 tgacgactca cttaatcacg tatattctaa aaaagatatc ctaggggggac tagaaatttt 480
 ggatttagat aaactaaaaa attcgtttga aaaattacta tctataaaaag aaactttctc 540
 aaaaatgcta aatcaacttt tattagatta taaaaatgat aaagatcata tacgaacaga 600
 gacaaataaa cttaaattct atacaactgc acttttctgaa caacttgata aaaaagaaga 660
 cgaagcatat gaacctaaaa atcag 685

<210> 607
 <211> 259
 <212> PRT
 <213> Homo sapiens

<400> 607
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 1 5 10 15

Cys Val Phe Leu Leu Leu Asn Ala Cys Asn Ser Asp Phe Ser Thr Asn
 20 25 30
 Gln Glu Asp Ile Lys Tyr Pro Ser Asp Lys Glu Lys Ser Lys Ser Asn
 35 40 45
 Met Glu Ala Ser Ser Lys Glu Glu Asp Pro Asn Lys Lys Ile Lys Asn
 50 55 60
 Thr Leu Leu Asn Asp Leu Ile Asn Leu Ile Glu Ile Ala Asn Glu His
 65 70 75 80
 Lys Glu Lys Tyr Glu Lys Arg Met Gln Glu Glu Pro Ser Asp Gln Tyr
 85 90 95
 Gly Ile Leu Ala Phe Gln Glu Leu Asp Leu Ser Val Gly Lys Ile Ser
 100 105 110
 Glu Asp Thr Pro Gln Ser Lys Lys Phe Arg Lys Asn Thr Tyr Ser Pro
 115 120 125
 Leu Ser Ala Ile Asp Val Asn Lys Leu Lys Asp Leu Ser Glu Ile Ile
 130 135 140
 Arg Asn Ser Gly Gln Ile Gln Gly Leu Phe Asn Ile Phe Asn Arg Phe
 145 150 155 160
 Gly Gly Ile Phe Asp Asp Ser Leu Asn His Val Tyr Ser Lys Lys Asp
 165 170 175
 Ile Leu Gly Gly Leu Glu Ile Leu Asp Leu Asp Lys Leu Lys Asn Ser
 180 185 190
 Phe Glu Lys Leu Leu Ser Ile Lys Glu Thr Phe Ser Lys Met Leu Asn
 195 200 205
 Gln Leu Leu Leu Asp Tyr Lys Asn Asp Lys Asp His Ile Arg Thr Glu
 210 215 220
 Thr Asn Lys Leu Lys Ser His Thr Thr Ala Leu Phe Glu Gln Leu Asp
 225 230 235 240
 Lys Lys Glu Asp Glu Ala Tyr Glu Pro Lys Asn Gln Ile Phe Ser Ile
 245 250 255
 Ser Asn Leu

<210> 608
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 608
 Cys Asn Ser Asp Phe Ser Thr Asn Gln Glu Asp Ile Lys Tyr Pro Ser
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 Asp Lys Glu Lys Ser Lys Ser Asn Met Glu Ala Ser Ser Lys Glu Glu
 20 25 30

Asp Pro Asn Lys Lys Ile Lys Asn Thr Leu Leu Asn Asp Leu Ile Asn
 35 40 45
 Leu Ile Glu Ile Ala Asn Glu His Lys Glu Lys Tyr Glu Lys Arg Met
 50 55 60
 Gln Glu Glu Pro Ser Asp Gln Tyr Gly Ile Leu Ala Phe Gln Glu Leu
 65 70 75 80
 Asp Leu Ser Val Gly Lys Ile Ser Glu Asp Thr Pro Gln Ser Lys Lys
 85 90 95
 Phe Arg Lys Asn Thr Tyr Ser Pro Leu Ser Ala Ile Asp Val Asn Lys
 100 105 110
 Leu Lys Asp Leu Ser Glu Ile Ile Arg Asn Ser Gly Gln Ile Gln Gly
 115 120 125
 Leu Phe Asn Ile Phe Asn Arg Phe Gly Gly Ile Phe Asp Asp Ser Leu
 130 135 140
 Asn His Val Tyr Ser Lys Lys Asp Ile Leu Gly Gly Leu Glu Ile Leu
 145 150 155 160
 Asp Leu Asp Lys Leu Lys Asn Ser Phe Glu Lys Leu Leu Ser Ile Lys
 165 170 175
 Glu Thr Phe Ser Lys Met Leu Asn Gln Leu Leu Leu Asp Tyr Lys Asn
 180 185 190
 Asp Lys Asp His Ile Arg Thr Glu Thr Asn Lys Leu Lys Ser His Thr
 195 200 205
 Thr Ala Leu Phe Glu Gln Leu Asp Lys Lys Glu Asp Glu Ala Tyr Glu
 210 215 220

Pro Lys Asn Gln
 225

<210> 609

<211> 912

<212> DNA

<213> Homo sapiens

<400> 609

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 tcaaggccca aaactgaaag ctctaagcaa aaagaatcaa agcctaaaac agaagaagag 180
 cttaagaaaa aacaacaaga agaagagctt aagaaaaaac aacaagaaga agagcttaag 240
 aaaaaacaac aagaagaaga gcttaagaaa aaacaacaag aagaagagaa ggaagaacta 300
 agaaaacaac aactaaaaaa tacgctatct aatgatttaa aaaagcaaat agaatcggcc 360
 tacaatttta aagaaaaata tgtaaaaagt atggaaaaag aacctgaaga ccattacggg 420
 atgacgtctt ttaggggatt gaattggggg ccagggactg aagatatatc tgacaatacc 480
 gaaagatcta taagatatag aagacacact tatactgttt taagccccct ggatcctcat 540
 gaattaaagg aattcgcaaa tattattcaa gatataaata aactagcatc agtagcaagt 600
 atatttaatt cttttagcgc tattggagga gctcttgaca tagtaagtga tcacctatat 660
 ttcaaaaaag acaatctaga caaactagat attgcagatt tagaaatact taaaaattca 720
 tttgaacaaa tattatatat aaaaggaagt gttgcaggaa aagcaaaaaa actttttatta 780
 gattataaaa atctaaaaac agatattaat aagcttaaat cttattcaaa tgaactggtt 840
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tataaaacttt aa

912

<210> 610

<211> 847

<212> DNA

<213> Homo sapiens

<400> 610

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taagaaaaaa caacaagaag aagagcttaa gaaaaaacia caagaagaag agcttaagaa 180
aaaacaacaa gaagaagagc ttaagaaaaa acaacaagaa gaagagaagg aagaactaag 240
aaaacaacaa ctaaaaaata cgctatctaa tgatttaaaa aagcaaatag aatcggccta 300
caatttttaa gaaaaatatg taaaaagtat ggaaaaagaa cctgaagacc attacgggat 360
gacgtctttt aggggattga attggggggc agggactgaa gatatatctg acaataccga 420
aagatctata agatatagaa gacacactta tactgtttta agccccctgg atcctcatga 480
attaaaggaa ttcgcaaata ttattcaaga tataaataaa ctagcatcag tagcaagtat 540
atttaattct tttagcgcta ttggaggagc tcttgacata gtaagtgatc acctatattt 600
caaaaaagac aatctagaca aactagatat tgcagattta gaaatactta aaaattcatt 660
tgaacaaata ttatatataa aaggaagtgt tgcaggaaaa gcaaaaaaac ttttattaga 720
ttataaaaat ctaaaaacag atattaataa gcttaaactt tattcaaag aactgggtta 780
tggaattaag caacaagctc tagaagcaga aaatctagaa gagcttatag tgtcaaaaata 840
taaactt
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847

<210> 611

<211> 302

<212> PRT

<213> Homo sapiens

<400> 611

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Leu Phe Leu Ala Cys Arg Pro Asp Phe Asn Ile Asp Gln Lys Asp Ile
 20             25             30

Lys Tyr Pro Pro Thr Glu Lys Ser Arg Pro Lys Thr Glu Ser Ser Lys
 35             40             45

Gln Lys Glu Ser Lys Pro Lys Thr Glu Glu Glu Leu Lys Lys Lys Gln
 50             55             60

Gln Glu Glu Glu Leu Lys Lys Lys Gln Gln Glu Glu Glu Leu Lys Lys
 65             70             75             80

Lys Gln Gln Glu Glu Glu Leu Lys Lys Lys Gln Gln Glu Glu Glu Lys
 85             90             95

Glu Glu Leu Arg Lys Gln Gln Leu Lys Asn Thr Leu Ser Asn Asp Leu
100            105            110

Lys Lys Gln Ile Glu Ser Ala Tyr Asn Phe Lys Glu Lys Tyr Val Lys
115            120            125

Ser Met Glu Lys Glu Pro Glu Asp His Tyr Gly Met Thr Ser Phe Arg
130            135            140

Gly Leu Asn Trp Gly Pro Gly Thr Glu Asp Ile Ser Asp Asn Thr Glu
145            150            155            160
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Arg Ser Ile Arg Tyr Arg Arg His Thr Tyr Thr Val Leu Ser Pro Leu
 165 170 175
 Asp Pro His Glu Leu Lys Glu Phe Ala Asn Ile Ile Gln Asp Ile Asn
 180 185 190
 Lys Leu Ala Ser Val Ala Ser Ile Phe Asn Ser Phe Ser Ala Ile Gly
 195 200 205
 Gly Ala Leu Asp Ile Val Ser Asp His Leu Tyr Phe Lys Lys Asp Asn
 210 215 220
 Leu Asp Lys Leu Asp Ile Ala Asp Leu Glu Ile Leu Lys Asn Ser Phe
 225 230 235 240
 Glu Gln Ile Leu Tyr Ile Lys Gly Ser Val Ala Gly Lys Ala Lys Lys
 245 250 255
 Leu Leu Leu Asp Tyr Lys Asn Leu Lys Thr Asp Ile Asn Lys Leu Lys
 260 265 270
 Ser Tyr Ser Asn Glu Leu Val Asn Gly Ile Lys Gln Gln Ala Leu Glu
 275 280 285
 Ala Glu Asn Leu Glu Glu Leu Ile Val Ser Lys Tyr Lys Leu
 290 295 300
 <210> 612
 <211> 282
 <212> PRT
 <213> Homo sapiens
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 Thr Glu Lys Ser Arg Pro Lys Thr Glu Ser Ser Lys Gln Lys Glu Ser
 20 25 30
 Lys Pro Lys Thr Glu Glu Glu Leu Lys Lys Lys Gln Gln Glu Glu Glu
 35 40 45
 Leu Lys Lys Lys Gln Gln Glu Glu Glu Leu Lys Lys Lys Gln Gln Glu
 50 55 60
 Glu Glu Leu Lys Lys Lys Gln Gln Glu Glu Glu Lys Glu Glu Leu Arg
 65 70 75 80
 Lys Gln Gln Leu Lys Asn Thr Leu Ser Asn Asp Leu Lys Lys Gln Ile
 85 90 95
 Glu Ser Ala Tyr Asn Phe Lys Glu Lys Tyr Val Lys Ser Met Glu Lys
 100 105 110
 Glu Pro Glu Asp His Tyr Gly Met Thr Ser Phe Arg Gly Leu Asn Trp
 115 120 125
 Gly Pro Gly Thr Glu Asp Ile Ser Asp Asn Thr Glu Arg Ser Ile Arg
 130 135 140

Tyr Arg Arg His Thr Tyr Thr Val Leu Ser Pro Leu Asp Pro His Glu
 145 150 155 160
 Leu Lys Glu Phe Ala Asn Ile Ile Gln Asp Ile Asn Lys Leu Ala Ser
 165 170 175
 Val Ala Ser Ile Phe Asn Ser Phe Ser Ala Ile Gly Gly Ala Leu Asp
 180 185 190
 Ile Val Ser Asp His Leu Tyr Phe Lys Lys Asp Asn Leu Asp Lys Leu
 195 200 205
 Asp Ile Ala Asp Leu Glu Ile Leu Lys Asn Ser Phe Glu Gln Ile Leu
 210 215 220
 Tyr Ile Lys Gly Ser Val Ala Gly Lys Ala Lys Lys Leu Leu Leu Asp
 225 230 235 240
 Tyr Lys Asn Leu Lys Thr Asp Ile Asn Lys Leu Lys Ser Tyr Ser Asn
 245 250 255
 Glu Leu Val Asn Gly Ile Lys Gln Gln Ala Leu Glu Ala Glu Asn Leu
 260 265 270
 Glu Glu Leu Ile Val Ser Lys Tyr Lys Leu
 275 280

<210> 613
 <211> 828
 <212> DNA
 <213> Homo sapiens

<400> 613
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 aaacctaata cagaacaag cttaaatacaa gaagaagtcc caaatcaaga agcaaaactac 180
 aaagaagaaa aagaagcaaa agaagaaggc attaataaaa aaacagaaaa cacgctgctt 240
 aatgatttaa gaaatttaaat agaaacagct aaaaaagata atgataaata tacacaaaag 300
 ttaaaagaag aatcctcaag ccaatacggg atactggctt tcaaagattt gttctggcta 360
 gatggaacaa atgaacaatt gtccgcaaat accgaaagat ctaaaagccta tagaaaacga 420
 gcttatagca tcttaaatac tattaatgac gcttccttaa agaatttttc agaaattgta 480
 atggcatcag gacaaacaca gggcatattt aataccctta actcacttgg gggtaatattt 540
 gaaaagatag ttaattgttt gtatcccaaa aaagacaatt tggaaaaaatt agagacttca 600
 gttttaaaaa agcttaaaga ttctttggaa aatttttttag agataaaaaa aatcgccctca 660
 gaaatgatgc acaagctctt attagactat caaaataata caaatcgat acaaacagat 720
 aaaaatgaac ttaagtctta tgcagacaca cttttcaatc aaatgacaaa aaaacccgaa 780
 gaagcactaa agctaaaaaa taccatatgc tcaatagagg acctttaa 828

<210> 614
 <211> 706
 <212> DNA
 <213> Homo sapiens

<400> 614
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 aggcattaat aaaaaaacag aaaacacgct gcttaatgat ttaagaaatt taatagaaac 180
 agctaaaaaa gataatgata aatatacaca aaagttaaaa gaagaatcct caagccaata 240
 cggaatactg gctttcaaag atttgttctg gctagatgga acaaatgaac aattgtccgc 300
 aaataccgaa agatctaaag cctatagaaa acgagcttat agcatcttaa atactattaa 360

tgacgcttcc ttaaagaatt tttcagaaat tgtaatggca tcaggacaaa cacagggcat 420
 atttaatacc cttaactcac ttgggggtaa ttttgaaaag atagttaatt gtttgtatcc 480
 caaaaaagac aatttggaag aattagagac ttcagtttta aaaaagctta aagattcttt 540
 ggaaaatttt ttagagataa aaaaaatcgc ctcagaaatg atgcacaagc tcttattaga 600
 ctatcaaaat aatacaaatc gtatacaaac agataaaaat gaacttaagt cttatgcaga 660
 cacacttttc aatcaaatga caaaaaaacc cgaagaagca ctaaag 706

<210> 615

<211> 274

<212> PRT

<213> Homo sapiens

<400> 615

Arg Lys Ile Lys Ser Tyr Ser Arg Arg Val Phe Met Lys His Tyr Ile
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Ile Val His Ile Phe Val Phe Leu Phe Leu Asn Ala Cys Tyr Pro Val
 20 25 30

Ala Ser Asn Lys Ile Glu Leu Lys Pro Lys Thr Glu Thr Ser Leu Asn
 35 40 45

Gln Glu Glu Val Pro Asn Gln Glu Ala Asn Tyr Lys Glu Glu Lys Glu
 50 55 60

Ala Lys Glu Glu Gly Ile Asn Lys Lys Thr Glu Asn Thr Leu Leu Asn
 65 70 75 80

Asp Leu Arg Asn Leu Ile Glu Thr Ala Lys Lys Asp Asn Asp Lys Tyr
 85 90 95

Thr Gln Lys Leu Lys Glu Glu Ser Ser Ser Gln Tyr Gly Ile Leu Ala
 100 105 110

Phe Lys Asp Leu Phe Trp Leu Asp Gly Thr Asn Glu Gln Leu Ser Ala
 115 120 125

Asn Thr Glu Arg Ser Lys Ala Tyr Arg Lys Arg Ala Tyr Ser Ile Leu
 130 135 140

Asn Thr Ile Asn Asp Ala Ser Leu Lys Asn Phe Ser Glu Ile Val Met
 145 150 155 160

Ala Ser Gly Gln Thr Gln Gly Ile Phe Asn Thr Leu Asn Ser Leu Gly
 165 170 175

Gly Asn Phe Glu Lys Ile Val Asn Cys Leu Tyr Pro Lys Lys Asp Asn
 180 185 190

Leu Glu Lys Leu Glu Thr Ser Val Leu Lys Lys Leu Lys Asp Ser Leu
 195 200 205

Glu Asn Phe Leu Glu Ile Lys Lys Ile Ala Ser Glu Met Met His Lys
 210 215 220

Leu Leu Leu Asp Tyr Gln Asn Asn Thr Asn Arg Ile Gln Thr Asp Lys
 225 230 235 240

Asn Glu Leu Lys Ser Tyr Ala Asp Thr Leu Phe Asn Gln Met Thr Lys
 245 250 255

Lys Pro Glu Glu Ala Leu Lys Leu Lys Asn Thr Ile Cys Ser Ile Glu
 260 265 270

Asp Leu

<210> 616
 <211> 235
 <212> PRT
 <213> Homo sapiens

<400> 616

Cys Tyr Pro Val Ala Ser Asn Lys Ile Glu Leu Lys Pro Lys Thr Glu
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Thr Ser Leu Asn Gln Glu Glu Val Pro Asn Gln Glu Ala Asn Tyr Lys
 20 25 30

Glu Glu Lys Glu Ala Lys Glu Glu Gly Ile Asn Lys Lys Thr Glu Asn
 35 40 45

Thr Leu Leu Asn Asp Leu Arg Asn Leu Ile Glu Thr Ala Lys Lys Asp
 50 55 60

Asn Asp Lys Tyr Thr Gln Lys Leu Lys Glu Glu Ser Ser Ser Gln Tyr
 65 70 75 80

Gly Ile Leu Ala Phe Lys Asp Leu Phe Trp Leu Asp Gly Thr Asn Glu
 85 90 95

Gln Leu Ser Ala Asn Thr Glu Arg Ser Lys Ala Tyr Arg Lys Arg Ala
 100 105 110

Tyr Ser Ile Leu Asn Thr Ile Asn Asp Ala Ser Leu Lys Asn Phe Ser
 115 120 125

Glu Ile Val Met Ala Ser Gly Gln Thr Gln Gly Ile Phe Asn Thr Leu
 130 135 140

Asn Ser Leu Gly Gly Asn Phe Glu Lys Ile Val Asn Cys Leu Tyr Pro
 145 150 155 160

Lys Lys Asp Asn Leu Glu Lys Leu Glu Thr Ser Val Leu Lys Lys Leu
 165 170 175

Lys Asp Ser Leu Glu Asn Phe Leu Glu Ile Lys Lys Ile Ala Ser Glu
 180 185 190

Met Met His Lys Leu Leu Leu Asp Tyr Gln Asn Asn Thr Asn Arg Ile
 195 200 205

Gln Thr Asp Lys Asn Glu Leu Lys Ser Tyr Ala Asp Thr Leu Phe Asn
 210 215 220

Gln Met Thr Lys Lys Pro Glu Glu Ala Leu Lys
 225 230 235

<210> 617
 <211> 696

<212> DNA
<213> Homo sapiens

<400> 617
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catgttgata aaacaaaaaa cgaatatatt aatgaaataa aaaatttaac agcaacaacc 180
aaagaaatca tcgaaaaaacg aaaattgcta caagctaaac cagtagatca aaaccccgt 240
gatgatacaa acaataagaa agttttcgag atagataaaa gagctttcga ttttataaat 300
agttttttta cagatgatga atttaataaa tttgtaacaa ttttcataa accaactacta 360
aaatcacccg gaaaagtatt aaatagcata gcaattctag agctaaacat agagcaggta 420
attaatcacc tagactcaaa aaatgagacc ttaaataaag caagctcttt agatttgga 480
aagatcaaaa attcccttga acagctgttc tctataagga attttttttc aacaatcata 540
aaaagggctt tattgatca tcaaaacaat gaaaattcta taaaaccaga tgattctaaa 600
tcaggaacct atttcgatac gatatacgat cagtttaatg aaaaaataa agagggttaga 660
aatctgaaaa aaaccatatt atcactgccc aattaa 696

<210> 618
<211> 592
<212> DNA
<213> Homo sapiens

<400> 618
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cgaatatatt aatgaaataa aaaatttaac agcaacaacc aaagaaatca tcgaaaaaacg 120
aaaattgcta caagctaaac cagtagatca aaaccccgt gatgatacaa acaataagaa 180
agttttcgag atagataaaa gagctttcga ttttataaat agttttttta cagatgatga 240
atttaataaa tttgtaacaa ttttcataa accaactacta aaatcacccg gaaaagtatt 300
aaatagcata gcaattctag agctaaacat agagcaggta attaatcacc tagactcaaa 360
aaatgagacc ttaaataaag caagctcttt agatttgga aagatcaaaa attcccttga 420
acagctgttc tctataagga attttttttc aacaatcata aaaagggctt tattgatca 480
tcaaaacaat gaaaattcta taaaaccaga tgattctaaa tcaggaacct atttcgatac 540
gatatacgat cagtttaatg aaaaaataa agagggttaga aatctgaaaa aa 592

<210> 619
<211> 230
<212> PRT
<213> Homo sapiens

<400> 619
Ser Ile Leu Ile Glu Glu Asn Ile Phe Met Lys Asn Asn Ile Ile Leu
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Cys Met Cys Val Phe Leu Leu Leu Asn Ser Cys Thr Ala Asn His Glu
20 25 30
Ala Glu Ala Lys Ile Lys Lys His Val Asp Lys Thr Lys Asn Glu Tyr
35 40 45
Ile Asn Glu Ile Lys Asn Leu Ile Ala Thr Thr Lys Glu Ile Ile Glu
50 55 60
Lys Arg Lys Leu Leu Gln Ala Lys Pro Val Asp Gln Asn Pro Val Asp
65 70 75 80
Asp Thr Asn Asn Lys Lys Val Phe Glu Ile Asp Lys Arg Ala Phe Asp
85 90 95
Phe Ile Asn Ser Phe Leu Thr Asp Asp Glu Phe Asn Lys Phe Val Thr
100 105 110

Ile Phe His Lys Pro Thr Leu Lys Ser Pro Gly Lys Val Leu Asn Ser
 115 120 125

Ile Ala Ile Leu Glu Leu Asn Ile Glu Gln Val Ile Asn His Leu Asp
 130 135 140

Ser Lys Asn Glu Thr Leu Asn Lys Ala Ser Ser Leu Asp Leu Glu Lys
 145 150 155 160

Ile Lys Asn Ser Leu Glu Gln Leu Phe Ser Ile Arg Asn Phe Phe Ser
 165 170 175

Thr Ile Ile Lys Arg Val Leu Leu Asp His Gln Asn Asn Glu Asn Ser
 180 185 190

Ile Lys Pro Asp Asp Ser Lys Ser Gly Thr Tyr Phe Asp Thr Ile Tyr
 195 200 205

Asp Gln Phe Asn Glu Lys Asn Lys Glu Val Arg Asn Leu Lys Lys Thr
 210 215 220

Ile Leu Ser Leu Pro Asn
 225 230

<210> 620
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 620
 Cys Thr Ala Asn His Glu Ala Glu Ala Lys Ile Lys Lys His Val Asp
 1 5 10 15

Lys Thr Lys Asn Glu Tyr Ile Asn Glu Ile Lys Asn Leu Ile Ala Thr
 20 25 30

Thr Lys Glu Ile Ile Glu Lys Arg Lys Leu Leu Gln Ala Lys Pro Val
 35 40 45

Asp Gln Asn Pro Val Asp Asp Thr Asn Asn Lys Lys Val Phe Glu Ile
 50 55 60

Asp Lys Arg Ala Phe Asp Phe Ile Asn Ser Phe Leu Thr Asp Asp Glu
 65 70 75 80

Phe Asn Lys Phe Val Thr Ile Phe His Lys Pro Thr Leu Lys Ser Pro
 85 90 95

Gly Lys Val Leu Asn Ser Ile Ala Ile Leu Glu Leu Asn Ile Glu Gln
 100 105 110

Val Ile Asn His Leu Asp Ser Lys Asn Glu Thr Leu Asn Lys Ala Ser
 115 120 125

Ser Leu Asp Leu Glu Lys Ile Lys Asn Ser Leu Glu Gln Leu Phe Ser
 130 135 140

Ile Arg Asn Phe Phe Ser Thr Ile Ile Lys Arg Val Leu Leu Asp His
 145 150 155 160

Gln Asn Asn Glu Asn Ser Ile Lys Pro Asp Asp Ser Lys Ser Gly Thr
 165 170 175

Tyr Phe Asp Thr Ile Tyr Asp Gln Phe Asn Glu Lys Asn Lys Glu Val
 180 185 190

Arg Asn Leu Lys Lys
 195

<210> 621
 <211> 588
 <212> DNA
 <213> Homo sapiens

<400> 621
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 gcttgtagta cagattttta tactgatcaa aaaggcatta aataccgccc taccgaaaaa 120
 tcaaagccca aaactgaaga ctctaagcaa aaagaattaa agcctaaaaac agaaaaagaa 180
 ctaaagaaaa aacaacaact aaaaaataaa ctacttaatg atttaaaaaa ttcaatagaa 240
 acagctaata agcataaaga aaagtataaa aaaagaatga aagaagaacc cgaagatcaa 300
 tacgggggtac aggttttcaa aggatcgaat tggggggccgg ggactgaaga tgtatctgcc 360
 aacaccgaaa gatctataag atttagaaga catacttata ctattttaag cacgctgagt 420
 cttcatgaat taaaggaatt ctcaaattatt gttacaaatg aaaataaact ggtgccagta 480
 gtagatatgt ttaattttct tagctctatt gggacagctc ttgatataac aaccgatagc 540
 ttatatccca aaaagacaat ctggacaaac cagatctgtc ggatttag 588

<210> 622
 <211> 520
 <212> DNA
 <213> Homo sapiens

<400> 622
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 aaagcccaaa actgaagact ctaagcaaaa agaattaaag cctaaaacag aaaaagaact 120
 aaagaaaaaa caacaactaa aaaataaact acttaatgat ttaaaaaatt caatagaaac 180
 agctaataag cataaagaaa agtataaaaa aagaatgaaa gaagaaccg aagatcaata 240
 cgggggtacag gctttcaaag gatcgaattg gggggccggg actgaagatg tatctgccaa 300
 caccgaaaga tctataagat ttagaagaca tacttatact attttaagca cgctgagtct 360
 tcatgaatta aaggaattct caaatattgt tacaatgaa aataaactgg tgccagtagt 420
 agatatgttt aattttcttta gctctattgg gacagctctt gatataacaa ccgatagctt 480
 atatcccaaa aagacaatct ggacaaacca gatctgtcgg 520

<210> 623
 <211> 194
 <212> PRT
 <213> Homo sapiens

<400> 623
 Arg Arg Val Leu Met Lys Cys His Ile Ile Ala Thr Ile Phe Val Phe
 1 5 10 15

Leu Phe Leu Ala Cys Ser Thr Asp Phe Asn Thr Asp Gln Lys Gly Ile
 20 25 30

Lys Tyr Pro Pro Thr Glu Lys Ser Lys Pro Lys Thr Glu Asp Ser Lys
 35 40 45

Gln Lys Glu Leu Lys Pro Lys Thr Glu Lys Glu Leu Lys Lys Lys Gln
 50 55 60

Gln Leu Lys Asn Lys Leu Leu Asn Asp Leu Lys Asn Ser Ile Glu Thr
 65 70 75 80
 Ala Asn Lys His Lys Glu Lys Tyr Lys Lys Arg Met Lys Glu Glu Pro
 85 90 95
 Glu Asp Gln Tyr Gly Val Gln Ala Phe Lys Gly Ser Asn Trp Gly Pro
 100 105 110
 Gly Thr Glu Asp Val Ser Ala Asn Thr Glu Arg Ser Ile Arg Phe Arg
 115 120 125
 Arg His Thr Tyr Thr Ile Leu Ser Thr Leu Ser Leu His Glu Leu Lys
 130 135 140
 Glu Phe Ser Asn Ile Val Thr Asn Glu Asn Lys Leu Val Pro Val Val
 145 150 155 160
 Asp Met Phe Asn Phe Phe Ser Ser Ile Gly Thr Ala Leu Asp Ile Thr
 165 170 175
 Thr Asp Ser Leu Tyr Pro Lys Lys Thr Ile Trp Thr Asn Gln Ile Cys
 180 185 190

Arg Ile

<210> 624
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 624

Cys Ser Thr Asp Phe Asn Thr Asp Gln Lys Gly Ile Lys Tyr Pro Pro
 1 5 10 15
 Thr Glu Lys Ser Lys Pro Lys Thr Glu Asp Ser Lys Gln Lys Glu Leu
 20 25 30
 Lys Pro Lys Thr Glu Lys Glu Leu Lys Lys Lys Gln Gln Leu Lys Asn
 35 40 45
 Lys Leu Leu Asn Asp Leu Lys Asn Ser Ile Glu Thr Ala Asn Lys His
 50 55 60
 Lys Glu Lys Tyr Lys Lys Arg Met Lys Glu Glu Pro Glu Asp Gln Tyr
 65 70 75 80
 Gly Val Gln Ala Phe Lys Gly Ser Asn Trp Gly Pro Gly Thr Glu Asp
 85 90 95
 Val Ser Ala Asn Thr Glu Arg Ser Ile Arg Phe Arg Arg His Thr Tyr
 100 105 110
 Thr Ile Leu Ser Thr Leu Ser Leu His Glu Leu Lys Glu Phe Ser Asn
 115 120 125
 Ile Val Thr Asn Glu Asn Lys Leu Val Pro Val Val Asp Met Phe Asn
 130 135 140

Phe Phe Ser Ser Ile Gly Thr Ala Leu Asp Ile Thr Thr Asp Ser Leu
 145 150 155 160

Tyr Pro Lys Lys Thr Ile Trp Thr Asn Gln Ile Cys Arg
 165 170

<210> 625
 <211> 690
 <212> DNA
 <213> Homo sapiens

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 ctgataagtt cttgtaagaa tgatgtaact agtaaagatt tagaaggggc ggtgaaagat 120
 ttagaaagtt cagaacaaaa tgtaaaaaaa acagaacaag agataaaaaa acaagttgaa 180
 ggatttttag aaatttttaga gacaaaagat ttaaaccacat tagatacaaa agaaattgaa 240
 aaacaaattc aagaattaaa gaataagata gaaaaattag actctaaaaa aacttctatt 300
 gaaacatatt ctgggtatga agaaaaaata aacaaaataa aagaaaaatt aaacggaaaa 360
 ggacttgaag ataaattaaa tgaactttca gagagcttaa aaaagaaaaa agaggagaga 420
 aaaaaagctt tacaagaggc taaaaagaaa tttgaagagt ataaaaacca agctgaatct 480
 gcaactggag taacgcatgg ttctcaagtc caaagacaag gtggtgttggtg attacaagct 540
 tggcagtgtg ctaatagttt ggggttttaa aatatgacta gtggttaataa tactagcgat 600
 atgaccaatg aagttataac taattcgctt aaaaagattg aagaagaact taaaaatatt 660
 ggagaaactg tagaaggtaa aaaagaataa 690

<210> 626
 <211> 616
 <212> DNA
 <213> Homo sapiens

<400> 626
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 agaacaaaat gtaaaaaaaa cagaacaaga gataaaaaaa caagttgaag gatttttaga 120
 aatttttagag acaaaaagatt taaacacatt agatacaaaa gaaattgaaa aacaaattca 180
 agaattaaag aataagatag aaaaattaga ctctaaaaaa acttctattg aaacatatct 240
 tgggtatgaa gaaaaaataa acaaaaataa agaaaaatta aacggaaaag gacttgaaga 300
 taaattaaat gaactttcag agagctttaa aaagaaaaaa gaggagagaa aaaaagcttt 360
 acaagaggct aaaaagaaat ttgaagagta taaaaaccaa gctgaatctg caactggagt 420
 aacgcatggt tctcaagtc aaagacaagg tgggtgttgga ttacaagctt ggcagtgtgc 480
 taatagtttg ggggtttaaa atatgactag tggtaataat actagcgata tgaccaatga 540
 agttataact aattcgctta aaaagattga agaagaactt aaaaatattg gagaaactgt 600
 agaaggtaaa aaagaa 616

<210> 627
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 627
 Glu Thr Ile Phe Met Asn Lys Lys Ile Lys Met Phe Ile Ile Cys Ala
 1 5 10 15

Ile Phe Met Leu Ile Ser Ser Cys Lys Asn Asp Val Thr Ser Lys Asp
 20 25 30

Leu Glu Gly Ala Val Lys Asp Leu Glu Ser Ser Glu Gln Asn Val Lys
 35 40 45

Lys Thr Glu Gln Glu Ile Lys Lys Gln Val Glu Gly Phe Leu Glu Ile

50 55 60
 Leu Glu Thr Lys Asp Leu Asn Thr Leu Asp Thr Lys Glu Ile Glu Lys
 65 70 75 80
 Gln Ile Gln Glu Leu Lys Asn Lys Ile Glu Lys Leu Asp Ser Lys Lys
 85 90 95
 Thr Ser Ile Glu Thr Tyr Ser Gly Tyr Glu Glu Lys Ile Asn Lys Ile
 100 105 110
 Lys Glu Lys Leu Asn Gly Lys Gly Leu Glu Asp Lys Leu Asn Glu Leu
 115 120 125
 Ser Glu Ser Leu Lys Lys Lys Lys Glu Glu Arg Lys Lys Ala Leu Gln
 130 135 140
 Glu Ala Lys Lys Lys Phe Glu Glu Tyr Lys Asn Gln Ala Glu Ser Ala
 145 150 155 160
 Thr Gly Val Thr His Gly Ser Gln Val Gln Arg Gln Gly Gly Val Gly
 165 170 175
 Leu Gln Ala Trp Gln Cys Ala Asn Ser Leu Gly Phe Lys Asn Met Thr
 180 185 190
 Ser Gly Asn Asn Thr Ser Asp Met Thr Asn Glu Val Ile Thr Asn Ser
 195 200 205
 Leu Lys Lys Ile Glu Glu Glu Leu Lys Asn Ile Gly Glu Thr Val Glu
 210 215 220
 Gly Lys Lys Glu
 225

<210> 628
 <211> 205
 <212> PRT
 <213> Homo sapiens

<400> 628
 Cys Lys Asn Asp Val Thr Ser Lys Asp Leu Glu Gly Ala Val Lys Asp
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 Leu Glu Ser Ser Glu Gln Asn Val Lys Lys Thr Glu Gln Glu Ile Lys
 20 25 30
 Lys Gln Val Glu Gly Phe Leu Glu Ile Leu Glu Thr Lys Asp Leu Asn
 35 40 45
 Thr Leu Asp Thr Lys Glu Ile Glu Lys Gln Ile Gln Glu Leu Lys Asn
 50 55 60
 Lys Ile Glu Lys Leu Asp Ser Lys Lys Thr Ser Ile Glu Thr Tyr Ser
 65 70 75 80
 Gly Tyr Glu Glu Lys Ile Asn Lys Ile Lys Glu Lys Leu Asn Gly Lys
 85 90 95
 Gly Leu Glu Asp Lys Leu Asn Glu Leu Ser Glu Ser Leu Lys Lys Lys

100	105	110
Lys Glu Glu Arg Lys Lys Ala Leu Gln Glu Ala Lys Lys Lys Phe Glu		
115	120	125
Glu Tyr Lys Asn Gln Ala Glu Ser Ala Thr Gly Val Thr His Gly Ser		
130	135	140
Gln Val Gln Arg Gln Gly Gly Val Gly Leu Gln Ala Trp Gln Cys Ala		
145	150	155
Asn Ser Leu Gly Phe Lys Asn Met Thr Ser Gly Asn Asn Thr Ser Asp		
165	170	175
Met Thr Asn Glu Val Ile Thr Asn Ser Leu Lys Lys Ile Glu Glu Glu		
180	185	190
Leu Lys Asn Ile Gly Glu Thr Val Glu Gly Lys Lys Glu		
195	200	205

<210> 629
 <211> 3990
 <212> DNA
 <213> Homo sapiens

<220>
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 <223> n equals a,t,g, or c

<220>
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 aaagagggca atgaaaaggc aggggaagtg tttgggaagg ctggtgctaa tgctcatggg 240
 gacagtggag ctgctagcaa ggcggctggg gctgttagtg ctgttagtgg ggagcagata 300
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 gggatgaaga aggatgatca gattgctgct gctattgctt tgagggggat ggctaaggat 480
 ggaaagtttg ctgtgaagaa tgatgagaaa ggggaaggctg aggggggctat taaggagagct 540
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 gtgaagggga ttgctaaggg gataaaggag attgttgaag ctgctggggg gagtgaagaa 660
 ctgaaagctg ctgctgctga aggggagaat aataaaaagg cagggaagtt gtttgggaa 720
 gttgatggtg ctgctgggga cagtgaggct gctagcaagg cggctggtgc tgttagtgct 780
 gttagtgggg agcagatatt aagtgcgatt gttaaggctg ctggtgaggc tgagcaggat 840
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 gatggtgctg agtttgatca ggatgagatg aagaaggatg atcagattgc tgctgctatt 960
 gctttgaggg ggatggctaa ggatggaaag tttgctgtga agggtaataa tgagaaagag 1020
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 ggagagaagc ctgcagaggc taaaaatccg attgctgctg ctattgggaa gggatgatgg 2520
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 aaggctgctg ataaggatag tgtgaagggg attgctaagg ggataaagga gattgttgaa 2760
 gctgctgggg ggagtgaaaa gctgaaagct gctgctgctg aaggggagaa taataaaaaa 2820
 gcagggaagt tgtttgggaa agttgatggg gctgctgggg acagtgaggc tgctagcaag 2880
 gcggctgggt ctgttagtgct tgttagtggt gagcagatat taagtgcgat tgttaaggct 2940
 gcggatgcgg ctgagcagga tggaaagaag cctgcagatg ctacaaatcc gattgctgct 3000
 gctattggga ataaagatga ggatgcggat tttgggtgat ggatgaagaa ggatgatcag 3060
 attgctgctg ctattgcttt gagggggatg gctaaggatg gaaagtttgc tgtgaagggt 3120
 aataatgaga aagggaaggc tgagggggct tcaagtggta ctgatgcaat tggagaagtt 3180
 gtggataatg atgcgaaggc tgctgataag gcgagtgta cggggattgc taaggggata 3240


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aaggagattg ttgaagctgc tgggggggagt gaaaagctga aagctgttgc tgctgctaca 3300
agggagaata ataaagagggc aggggaagttg tttgggaaaag ttgatgatgc tcatgctggg 3360
gacagtgagg ctgctagcaa ggcggctggt gctgttagtg ctgttagtgg ggagcagata 3420
ttaagtgcga ttgttacggc tgcggctgct ggtgagcagg atggagagaa gcctgcagag 3480
gctacaaatc cgattgctgc tgctattggg aagggtaatg aggatggtgc ggatttttgt 3540
aaggatgaga tgaagaagga tgatcagatt gctgctgcta ttgctttgag ggggatggct 3600
aaggatggaa agtttgctgt gaagagtaat gatggtgaga aagggaaggc tgagggggct 3660
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gctgataagg cgagtgtgac ggggattgct aaggggataa aggagattgt tgaagctgct 3840
gggggggagta aaaagctgaa agctgctgct gctgaagggg agaataataa aaaggcaggg 3900
aagttgtttg ggaaggctgg tgctggtgct ggtgctaata gggacagtga ggctgctagc 3960
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<210> 630

<211> 505

<212> DNA

<213> Homo sapiens

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<221> misc_feature

<222> (318)

<223> n equals a,t,g, or c

<220>

<221> misc_feature

<222> (322)

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<220>

<221> misc_feature

<222> (327)

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<220>

<221> misc_feature

<222> (389)

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<221> misc_feature

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<221> misc_feature

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<223> n equals a,t,g, or c

<400> 630

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tcagattgct gctgctattg ctttgagggg gatggctaag gatggaaagt ttgctgtgaa 180
gggtaataat gagaaagaga aggctgaggg ggctattaaa gaagttagcg agttgttgga 240
taagctggta acagctgtaa agacagctga gggggccttca agtgggtactg atgcaattgg 300
agaagttgtg gataatgntg cnaaggntgc tgataaggcg agtgtgacgg ggattgctaa 360
ggggataaag gagattgttg aagctgctng ggggagtgaa aagctgaaag ttgctgctgc 420
tanagnggnn aataataaag aggcaggga gttgtttggg aaggctggtg ctgatgctaa 480
tggggacagt gaggctgcta gcaag 505

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<210> 631
<211> 1328
<212> PRT
<213> Homo sapiens

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<220>
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<222> (379)
<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
<221> SITE
<222> (382)
<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
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<220>
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<220>
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<220>
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<223> Xaa equals any of the naturally occurring L-amino acids

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<400> 631
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Ala Ile Gly Glu Val Val Asp Asn Asp Ala Lys Val Ala Asp Lys Ala
      20              25              30
Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala Ala
      35              40              45
Arg Gly Ser Glu Lys Leu Lys Val Ala Ala Ala Lys Glu Gly Asn Glu
      50              55              60
Lys Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala Asn Ala His Gly Asp
      65              70              75              80

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Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala Val Ser Gly
 85 90 95
 Glu Gln Ile Leu Ser Ala Ile Val Lys Ala Ala Asp Ala Ala Glu Gln
 100 105 110
 Asp Gly Lys Lys Pro Ala Asp Ala Thr Asn Pro Ile Ala Ala Ile
 115 120 125
 Gly Asn Lys Asp Glu Asp Ala Asp Phe Gly Asp Gly Met Lys Lys Asp
 130 135 140
 Asp Gln Ile Ala Ala Ala Ile Ala Leu Arg Gly Met Ala Lys Asp Gly
 145 150 155 160
 Lys Phe Ala Val Lys Asn Asp Glu Lys Gly Lys Ala Glu Gly Ala Ile
 165 170 175
 Lys Gly Ala Ala Ala Ile Gly Glu Val Val Asp Asn Ala Gly Ala Ala
 180 185 190
 Lys Ala Ala Asp Lys Asp Ser Val Lys Gly Ile Ala Lys Gly Ile Lys
 195 200 205
 Glu Ile Val Glu Ala Ala Gly Gly Ser Glu Lys Leu Lys Ala Ala Ala
 210 215 220
 Ala Glu Gly Glu Asn Asn Lys Lys Ala Gly Lys Leu Phe Gly Lys Val
 225 230 235 240
 Asp Gly Ala Ala Gly Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala
 245 250 255
 Val Ser Ala Val Ser Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala
 260 265 270
 Ala Gly Glu Ala Glu Gln Asp Gly Glu Lys Pro Glu Asp Ala Lys Asn
 275 280 285
 Pro Ile Ala Ala Ala Ile Gly Lys Gly Asn Gly Asp Gly Ala Glu Phe
 290 295 300
 Asp Gln Asp Glu Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala
 305 310 315 320
 Leu Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Gly Asn Asn
 325 330 335
 Glu Lys Glu Lys Ala Glu Gly Ala Ile Lys Glu Val Ser Glu Leu Leu
 340 345 350
 Asp Lys Leu Val Thr Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly
 355 360 365
 Thr Asp Ala Ile Gly Glu Val Val Asp Asn Xaa Ala Lys Xaa Ala Asp
 370 375 380
 Lys Ala Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu
 385 390 395 400

Ala Ala Xaa Gly Ser Glu Lys Leu Lys Val Ala Ala Ala Xaa Xaa Xaa
 405 410 415
 Asn Asn Lys Glu Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala Asp Ala
 420 425 430
 Asn Gly Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala
 435 440 445
 Val Ser Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala Ala Ala Ala
 450 455 460
 Gly Ala Ala Asp Gln Asp Gly Glu Lys Pro Gly Asp Ala Lys Asn Pro
 465 470 475 480
 Ile Ala Ala Ala Ile Gly Lys Gly Asn Ala Asp Asp Gly Ala Asp Phe
 485 490 495
 Gly Asp Gly Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu
 500 505 510
 Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Lys Asp Glu Lys
 515 520 525
 Gly Lys Ala Glu Gly Ala Ile Lys Gly Ala Ser Glu Leu Leu Asp Lys
 530 535 540
 Leu Val Lys Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly Thr Ala
 545 550 555 560
 Ala Ile Gly Glu Val Val Asp Asn Ala Ala Lys Ala Ala Asp Lys Asp
 565 570 575
 Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala Ala
 580 585 590
 Gly Gly Ser Glu Lys Leu Lys Val Ala Ala Ala Lys Gly Glu Asn Asn
 595 600 605
 Lys Gly Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala Asn Ala His Gly
 610 615 620
 Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala Val Ser
 625 630 635 640
 Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala Ala Gly Glu Ala Ala
 645 650 655
 Gly Asp Gln Glu Gly Lys Lys Pro Glu Glu Ala Lys Asn Pro Ile Ala
 660 665 670
 Ala Ala Ile Gly Asp Lys Asp Gly Asp Ala Glu Phe Asn Gln Asp Gly
 675 680 685
 Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu Arg Gly Met
 690 695 700
 Ala Lys Asp Gly Lys Phe Ala Val Lys Asp Gly Gly Glu Lys Glu Lys
 705 710 715 720

Ala Glu Gly Ala Ile Lys Gly Val Ser Glu Leu Leu Asp Lys Leu Val
 725 730 735
 Lys Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly Thr Ala Ala Ile
 740 745 750
 Gly Glu Val Val Ala Asp Ala Ala Lys Val Ala Asp Lys Ala Ser Val
 755 760 765
 Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala Ala Gly Asp
 770 775 780
 Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala Val Ser Gly
 785 790 795 800
 Glu Gln Ile Leu Ser Ala Ile Val Lys Ala Ala Ala Ala Gly Ala Ala
 805 810 815
 Glu Gln Asp Gly Glu Lys Pro Ala Glu Ala Lys Asn Pro Ile Ala Ala
 820 825 830
 Ala Ile Gly Lys Gly Asp Gly Asp Ala Asp Phe Gly Glu Asp Gly Met
 835 840 845
 Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu Arg Gly Met Ala
 850 855 860
 Lys Asp Gly Lys Phe Ala Val Lys Asn Asp Glu Lys Gly Lys Ala Glu
 865 870 875 880
 Gly Ala Ile Lys Gly Ala Ala Ala Ile Gly Glu Val Val Asp Asn Ala
 885 890 895
 Gly Ala Ala Lys Ala Ala Asp Lys Asp Ser Val Lys Gly Ile Ala Lys
 900 905 910
 Gly Ile Lys Glu Ile Val Glu Ala Ala Gly Gly Ser Glu Lys Leu Lys
 915 920 925
 Ala Ala Ala Ala Glu Gly Glu Asn Asn Lys Lys Ala Gly Lys Leu Phe
 930 935 940
 Gly Lys Val Asp Gly Ala Ala Gly Asp Ser Glu Ala Ala Ser Lys Ala
 945 950 955 960
 Ala Gly Ala Val Ser Ala Val Ser Gly Glu Gln Ile Leu Ser Ala Ile
 965 970 975
 Val Lys Ala Ala Asp Ala Ala Glu Gln Asp Gly Lys Lys Pro Ala Asp
 980 985 990
 Ala Thr Asn Pro Ile Ala Ala Ala Ile Gly Asn Lys Asp Glu Asp Ala
 995 1000 1005
 Asp Phe Gly Asp Gly Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile
 1010 1015 1020
 Ala Leu Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Gly Asn
 1025 1030 1035 1040

Asn Glu Lys Gly Lys Ala Glu Gly Ala Ser Ser Gly Thr Asp Ala Ile
 1045 1050 1055
 Gly Glu Val Val Asp Asn Asp Ala Lys Ala Ala Asp Lys Ala Ser Val
 1060 1065 1070
 Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala Ala Gly Gly
 1075 1080 1085
 Ser Glu Lys Leu Lys Ala Val Ala Ala Ala Thr Arg Glu Asn Asn Lys
 1090 1095 1100
 Glu Ala Gly Lys Leu Phe Gly Lys Val Asp Asp Ala His Ala Gly Asp
 1105 1110 1115 1120
 Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala Val Ser Gly
 1125 1130 1135
 Glu Gln Ile Leu Ser Ala Ile Val Thr Ala Ala Ala Ala Gly Glu Gln
 1140 1145 1150
 Asp Gly Glu Lys Pro Ala Glu Ala Thr Asn Pro Ile Ala Ala Ala Ile
 1155 1160 1165
 Gly Lys Gly Asn Glu Asp Gly Ala Asp Phe Gly Lys Asp Glu Met Lys
 1170 1175 1180
 Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu Arg Gly Met Ala Lys
 1185 1190 1195 1200
 Asp Gly Lys Phe Ala Val Lys Ser Asn Asp Gly Glu Lys Gly Lys Ala
 1205 1210 1215
 Glu Gly Ala Ile Lys Glu Val Ser Glu Leu Leu Asp Lys Leu Val Lys
 1220 1225 1230
 Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly Thr Asp Ala Ile Gly
 1235 1240 1245
 Glu Val Val Ala Asn Ala Gly Ala Ala Lys Ala Ala Asp Lys Ala Ser
 1250 1255 1260
 Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala Ala Gly
 1265 1270 1275 1280
 Gly Ser Lys Lys Leu Lys Ala Ala Ala Ala Glu Gly Glu Asn Asn Lys
 1285 1290 1295
 Lys Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala Gly Ala Gly Ala Asn
 1300 1305 1310
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 <210> 632
 <211> 168
 <212> PRT
 <213> Homo sapiens

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 <223> Xaa equals any of the naturally occurring L-amino acids

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<220>
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 Ile Ala Ala Ala Ile Gly Lys Gly Asn Gly Asp Gly Ala Glu Phe Asp
 20 25 30
 Gln Asp Glu Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu
 35 40 45
 Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Gly Asn Asn Glu
 50 55 60
 Lys Glu Lys Ala Glu Gly Ala Ile Lys Glu Val Ser Glu Leu Leu Asp
 65 70 75 80
 Lys Leu Val Thr Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly Thr
 85 90 95
 Asp Ala Ile Gly Glu Val Val Asp Asn Xaa Ala Lys Xaa Ala Asp Lys
 100 105 110
 Ala Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu Ala
 115 120 125
 Ala Xaa Gly Ser Glu Lys Leu Lys Val Ala Ala Ala Xaa Xaa Xaa Asn
 130 135 140
 Asn Lys Glu Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala Asp Ala Asn
 145 150 155 160

Gly Asp Ser Glu Ala Ala Ser Lys
165

<210> 633
<211> 1008
<212> DNA
<213> Homo sapiens

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<400> 633
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atagaacagt ttgcattagc attaaaagat catcaagaaa ataaaaatac tactaatact 180
tcagtagata aaaatagtaa ggaaattgaa tctcctaaag acgttacatc atcaaataaa 240
aaaacttatg atccaatctt acaagtaggt tctaatacaac atatgtcaga tgatcctggg 300
gctaataata aagaatccct accaaattca agtccagcaa taatacaaaa tgactcgcat 360
gctcaaaaata atgtaaagat ggaagaaaat aaatcagcta ctccacaaca tgatccaatt 420
gaacaaagta attttaaaaa tagccttact acaacaagta aaactcctgc tattccttca 480
gaagaagaaa ttaaagctaa cttagatgaa tttgcacaag aagagtatga gcaaacatct 540
ctttcagaaa ttaaaaatgc cacgcaaatt gttaatcatg ctaatcctga aaacaaatta 600
aacaatacac tccttgagtt tgaaaaagat tatgaaactt tatcaaactt gttattctct 660
aatttagacg catctccttt gaatagaaaa ataaagacta ttatgcctaa attacaagaa 720
atgctgttctt ttatggagca agcaactaat tcttgggtat ctgctaaagg catgctagat 780
gaggctaagg ataaactagc agaatctatt tataaaagac tatacaatgg caattcatac 840
cggttcgggtg gcagttttta cggacgtgat atgcaacatg caaaaaattt agcatacaga 900
gctatagact ttgcttctgc atgcattgaa tatacacaaa aagctattga ttatcttcaa 960
cagggaattt cttgcaaaaa agaaatagaa aatatattca agctttaa 1008

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<210> 634
<211> 859
<212> DNA
<213> Homo sapiens

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<400> 634
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aattgaatct cctaaagacg ttacatcatc aaataaaaaa acttatgac caatcttaca 120
agtaggttct aatcaacata tgtcagatga tcctgggtgct aataataaag aatccctacc 180
aaattcaagt ccagcaataa taaaaaatga ctgcgatgct caaaataatg taaagatgga 240
agaaaataaa tcagctactc cacaacatga tccaattgaa caaagtaatt taaaaaatag 300
ccttactaca acaagtaaaa ctcttgctat tccttcagaa gaagaaatta aagctaactt 360
agatgaattt gcacaagaag agtatgagca aacatctctt tcagaaatta aaaatgccac 420
gcaaatgtgt aatcatgcta atcctgaaaa caaattaaac aataactcct ttgagtttga 480
aaaagattat gaaactttat caaacttggt attctctaatt ttagacgcat ctcctttgaa 540
tagaaaaata aagactatta tgccataaatt acaagaaatg cggtctttta tggagcaagc 600
aactaattct tgggtatctg ctaaaggcat gctagatgag gctaaggata aactagcaga 660
atctatttat aaaagactat acaatggcaa ttcataccgg ttcggtggca gttttaacgg 720
acgtgatatg caacatgcaa aaaatttagc atacagagct atagactttg cttctgcatg 780
cattgaatat acacaaaaag ctattgatta tcttcaacag ggaaattctt gcaaaaaaga 840
aatagaaaat atattcaag 859

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<210> 635
<211> 334
<212> PRT
<213> Homo sapiens

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<400> 635
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20					25					30					
Gly	Phe	Leu	Ser	Lys	Lys	Ser	Ile	Glu	Gln	Phe	Ala	Leu	Ala	Leu	Lys
		35					40					45			
Asp	His	Gln	Glu	Asn	Lys	Asn	Thr	Thr	Asn	Thr	Ser	Val	Asp	Lys	Asn
	50					55					60				
Ser	Lys	Glu	Ile	Glu	Ser	Pro	Lys	Asp	Val	Thr	Ser	Ser	Asn	Lys	Lys
	65					70					75				80
Thr	Tyr	Asp	Pro	Ile	Leu	Gln	Val	Gly	Ser	Asn	Gln	His	Met	Ser	Asp
				85					90					95	
Asp	Pro	Gly	Ala	Asn	Asn	Lys	Glu	Ser	Leu	Pro	Asn	Ser	Ser	Pro	Ala
			100					105					110		
Ile	Ile	Gln	Asn	Asp	Ser	His	Ala	Gln	Asn	Asn	Val	Lys	Met	Glu	Glu
		115					120					125			
Asn	Lys	Ser	Ala	Thr	Pro	Gln	His	Asp	Pro	Ile	Glu	Gln	Ser	Asn	Phe
	130					135					140				
Lys	Asn	Ser	Leu	Thr	Thr	Thr	Ser	Lys	Thr	Pro	Ala	Ile	Pro	Ser	Glu
	145					150					155				160
Glu	Glu	Ile	Lys	Ala	Asn	Leu	Asp	Glu	Phe	Ala	Gln	Glu	Glu	Tyr	Glu
				165					170					175	
Gln	Thr	Ser	Leu	Ser	Glu	Ile	Lys	Asn	Ala	Thr	Gln	Ile	Val	Asn	His
			180					185					190		
Ala	Asn	Pro	Glu	Asn	Lys	Leu	Asn	Asn	Thr	Leu	Leu	Glu	Phe	Glu	Lys
		195					200					205			
Asp	Tyr	Glu	Thr	Leu	Ser	Asn	Leu	Leu	Phe	Ser	Asn	Leu	Asp	Ala	Ser
	210					215					220				
Pro	Leu	Asn	Arg	Lys	Ile	Lys	Thr	Ile	Met	Pro	Lys	Leu	Gln	Glu	Met
	225					230					235				240
Arg	Ser	Phe	Met	Glu	Gln	Ala	Thr	Asn	Ser	Trp	Val	Ser	Ala	Lys	Gly
				245					250					255	
Met	Leu	Asp	Glu	Ala	Lys	Asp	Lys	Leu	Ala	Glu	Ser	Ile	Tyr	Lys	Arg
		260						265					270		
Leu	Tyr	Asn	Gly	Asn	Ser	Tyr	Arg	Phe	Gly	Gly	Ser	Phe	Asn	Gly	Arg
		275					280					285			
Asp	Met	Gln	His	Ala	Lys	Asn	Leu	Ala	Tyr	Arg	Ala	Ile	Asp	Phe	Ala
	290					295					300				
Ser	Ala	Cys	Ile	Glu	Tyr	Thr	Gln	Lys	Ala	Ile	Asp	Tyr	Leu	Gln	Gln
	305					310					315				320
Gly	Asn	Ser	Cys	Lys	Lys	Glu	Ile	Glu	Asn	Ile	Phe	Lys	Leu		
				325					330						

<210> 636

<211> 286
 <212> PRT
 <213> Homo sapiens

<400> 636

Lys	Asp	His	Gln	Glu	Asn	Lys	Asn	Thr	Thr	Asn	Thr	Ser	Val	Asp	Lys
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Asn	Ser	Lys	Glu	Ile	Glu	Ser	Pro	Lys	Asp	Val	Thr	Ser	Ser	Asn	Lys
		20						25					30		
Lys	Thr	Tyr	Asp	Pro	Ile	Leu	Gln	Val	Gly	Ser	Asn	Gln	His	Met	Ser
		35					40					45			
Asp	Asp	Pro	Gly	Ala	Asn	Asn	Lys	Glu	Ser	Leu	Pro	Asn	Ser	Ser	Pro
	50					55					60				
Ala	Ile	Ile	Gln	Asn	Asp	Ser	His	Ala	Gln	Asn	Asn	Val	Lys	Met	Glu
	65				70					75					80
Glu	Asn	Lys	Ser	Ala	Thr	Pro	Gln	His	Asp	Pro	Ile	Glu	Gln	Ser	Asn
				85					90					95	
Phe	Lys	Asn	Ser	Leu	Thr	Thr	Thr	Ser	Lys	Thr	Pro	Ala	Ile	Pro	Ser
			100					105					110		
Glu	Glu	Glu	Ile	Lys	Ala	Asn	Leu	Asp	Glu	Phe	Ala	Gln	Glu	Glu	Tyr
		115					120					125			
Glu	Gln	Thr	Ser	Leu	Ser	Glu	Ile	Lys	Asn	Ala	Thr	Gln	Ile	Val	Asn
		130				135					140				
His	Ala	Asn	Pro	Glu	Asn	Lys	Leu	Asn	Asn	Thr	Leu	Leu	Glu	Phe	Glu
	145				150				155						160
Lys	Asp	Tyr	Glu	Thr	Leu	Ser	Asn	Leu	Leu	Phe	Ser	Asn	Leu	Asp	Ala
				165				170						175	
Ser	Pro	Leu	Asn	Arg	Lys	Ile	Lys	Thr	Ile	Met	Pro	Lys	Leu	Gln	Glu
			180					185					190		
Met	Arg	Ser	Phe	Met	Glu	Gln	Ala	Thr	Asn	Ser	Trp	Val	Ser	Ala	Lys
		195					200					205			
Gly	Met	Leu	Asp	Glu	Ala	Lys	Asp	Lys	Leu	Ala	Glu	Ser	Ile	Tyr	Lys
	210					215					220				
Arg	Leu	Tyr	Asn	Gly	Asn	Ser	Tyr	Arg	Phe	Gly	Gly	Ser	Phe	Asn	Gly
	225				230					235					240
Arg	Asp	Met	Gln	His	Ala	Lys	Asn	Leu	Ala	Tyr	Arg	Ala	Ile	Asp	Phe
				245					250					255	
Ala	Ser	Ala	Cys	Ile	Glu	Tyr	Thr	Gln	Lys	Ala	Ile	Asp	Tyr	Leu	Gln
			260					265					270		
Gln	Gly	Asn	Ser	Cys	Lys	Lys	Glu	Ile	Glu	Asn	Ile	Phe	Lys		
		275					280					285			

<210> 637

<211> 630
 <212> DNA
 <213> Homo sapiens

<400> 637
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 gacaacaaca agtcttttaa tacttttagga agcagcaatg agagtagaag tcgcaggcct 180
 agaagtacaa ataatgctta tatgaaacaa aacatagaca aaaatcattt agttgttgca 240
 gatatgcaaa atgataatag tagcagcagt cttccccaac aagttaatag tgaatccagt 300
 aaagctaatt aagatagtaa tattatgaag gaaattgaat cttctacaga agagtgcgct 360
 agactaagaa aagatttaga aactataaaa caaatacttg ataatataga aagcttgctt 420
 aatacagcta attcttattt agagaacgct agaaaagcac ctaaatactaa tcaagataat 480
 caaaccttat tgcttagcct gcaccaagct attgctaagg ttaagagtag tcatacttct 540
 tttatcattt gttataatga tgcatttaat tccctgggaa tagctgatac tgccctttaa 600
 gatgcaaaga gaaaggcagt tgaggcataa 630

<210> 638
 <211> 562
 <212> DNA
 <213> Homo sapiens

<400> 638
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 caacaagtct ttttaactt taggaagcag caatgagagt agaagtcgca ggcctagaag 120
 tacaataat gcttatatga aacaaaacat agacaaaaat catttagttg ttgcagatat 180
 gcaaaatgat aatagtagca gcagtcttcc ccaacaagtt aatagtgaat ccagtaaagc 240
 taatgaagat agtaataatta tgaaggaaat tgaatcttct acagaagagt gcgctagact 300
 aagaaaagat ttagaaacta taaaacaaat acttgataat atagaaagct tgcttaatac 360
 agctaattct tatttagaga acgctagaaa agcacctaaa tctaatacaag ataatacaac 420
 cttattgctt agcctgcacc aagctattgc taagggttaag agtagtcata cttcttttat 480
 catttggtat aatgatgcat ttaattccct gggaatagct gatactgcct ttaaagatgc 540
 aaagagaaag gcagttgagg ca 562

<210> 639
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 639
 Met Asn Leu Ile Ala Lys Leu Phe Ile Leu Ser Thr Leu Val Ser Ile
 1 5 10 15
 Pro Asn Ile Leu Ser Cys Asn Leu Tyr Asp Asn Leu Ala Asp Asn Ala
 20 25 30
 Glu Gln Val Thr Asp Ile Leu Asp Asn Asn Lys Ser Phe Asn Thr Leu
 35 40 45
 Gly Ser Ser Asn Glu Ser Arg Ser Arg Arg Pro Arg Ser Thr Asn Asn
 50 55 60
 Ala Tyr Met Lys Gln Asn Ile Asp Lys Asn His Leu Val Val Ala Asp
 65 70 75 80
 Met Gln Asn Asp Asn Ser Ser Ser Ser Leu Pro Gln Gln Val Asn Ser
 85 90 95
 Glu Ser Ser Lys Ala Asn Glu Asp Ser Asn Ile Met Lys Glu Ile Glu
 100 105 110

Ser Ser Thr Glu Glu Cys Ala Arg Leu Arg Lys Asp Leu Glu Thr Ile
 115 120 125

Lys Gln Ile Leu Asp Asn Ile Glu Ser Leu Leu Asn Thr Ala Asn Ser
 130 135 140

Tyr Leu Glu Asn Ala Arg Lys Ala Pro Lys Ser Asn Gln Asp Asn Gln
 145 150 155 160

Thr Leu Leu Leu Ser Leu His Gln Ala Ile Ala Lys Val Lys Ser Ser
 165 170 175

His Thr Ser Phe Ile Ile Cys Tyr Asn Asp Ala Phe Asn Ser Leu Gly
 180 185 190

Ile Ala Asp Thr Ala Phe Lys Asp Ala Lys Arg Lys Ala Val Glu Ala
 195 200 205

<210> 640

<211> 187

<212> PRT

<213> Homo sapiens

<400> 640

Cys Asn Leu Tyr Asp Asn Leu Ala Asp Asn Ala Glu Gln Val Thr Asp
 1 5 10 15

Ile Leu Asp Asn Asn Lys Ser Phe Asn Thr Leu Gly Ser Ser Asn Glu
 20 25 30

Ser Arg Ser Arg Arg Pro Arg Ser Thr Asn Asn Ala Tyr Met Lys Gln
 35 40 45

Asn Ile Asp Lys Asn His Leu Val Val Ala Asp Met Gln Asn Asp Asn
 50 55 60

Ser Ser Ser Ser Leu Pro Gln Gln Val Asn Ser Glu Ser Ser Lys Ala
 65 70 75 80

Asn Glu Asp Ser Asn Ile Met Lys Glu Ile Glu Ser Ser Thr Glu Glu
 85 90 95

Cys Ala Arg Leu Arg Lys Asp Leu Glu Thr Ile Lys Gln Ile Leu Asp
 100 105 110

Asn Ile Glu Ser Leu Leu Asn Thr Ala Asn Ser Tyr Leu Glu Asn Ala
 115 120 125

Arg Lys Ala Pro Lys Ser Asn Gln Asp Asn Gln Thr Leu Leu Leu Ser
 130 135 140

Leu His Gln Ala Ile Ala Lys Val Lys Ser Ser His Thr Ser Phe Ile
 145 150 155 160

Ile Cys Tyr Asn Asp Ala Phe Asn Ser Leu Gly Ile Ala Asp Thr Ala
 165 170 175

Phe Lys Asp Ala Lys Arg Lys Ala Val Glu Ala
 180 185

<210> 641
 <211> 1080
 <212> DNA
 <213> Homo sapiens

<400> 641
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 gaaacttctt tttctgatac tgctagcaag attagtaagt cggaacagc tgcttcttca 180
 gacaaacaag aaaaaaatac aagtgatgtt acaggtgacg ccaaaaagca tactagtagc 240
 ccttacatgc ttgctgatgc ccttattgtt agtgatacta ctaatagaga tagagataag 300
 caagaaaata aagataaatt aaatgaagaa gataaaaaaa agcttaatgc tttttttagc 360
 acaactaaaa catatcaatc tagcctagat tccatttata acaaatatac aggctattat 420
 aataccattg atacctatgg cagctgtgat acgtatcgca ttgagtgttt tagtgtagga 480
 ccttctgaaa aacgtaaaca agctcttgct gatctagaga agttaaaact agacgaaaag 540
 tacactcagc ttagcacaat gttaaagagt gctgtgccta gttattacaa aaaaaattta 600
 gatgattcta ttgcacagta taagggaagcc ataaagcagg ctattgaagc tgaaagtaaa 660
 atagagacag taaaagacta tgcaacagct caaagtgtcg ccgatgacga aaagaaaaga 720
 aatatagata atttaaaaaat agttagagat gttcttctta ttattaaaaa aactattgag 780
 aaagccagcc gatcttatgc tgatgctttt gctattgcaa catctagctt atcttgtagc 840
 gaatttaagc aagctgttaa agagtttaat gatgctgcta aacaatatgc taatggaaat 900
 aaaggagaca atgctgtcaa tgttattgta ggcactattt ctagtatgcc ttatgtcaaa 960
 tttaaagatg agtttgcaag agcaaaaatg tttgctcgta attatagagg agacgaggtta 1020
 gacaagatga taagagctat cgacaagctg tgtgatgttt ataaaaaagt tgcgctttag 1080

<210> 642
 <211> 970
 <212> DNA
 <213> Homo sapiens

<400> 642
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 tactgctagc aagattagta agtcgggaac agctgcttct tcagacaaac aagaaaaaaa 120
 tacaagtgat gttacagggt acgccaaaaa gcatactagt agcccttaca tgcttgctga 180
 tgcccttatt gttagtata ctactaatag agatagagat aagcaagaaa ataaagataa 240
 attaaatgaa gaagataaaa aaaagcttaa tgcttttttt agcacaacta aaacatatca 300
 atctagccta gattccattt ataacaaata tacaggctat tataatacca ttgataccta 360
 tggcagctgt gatacgtatc gcattgagtg ttttagtgta ggaccttctg aaaaacgtaa 420
 acaagctctt gctgatctag agaagttaaa actagacgaa aagtacactc agcttagcac 480
 aatgttaaag agtgctgtgc ctagttatta caaaaaaaat ttagatgatt ctattgcaca 540
 gtataaggaa gccataaagc aggctattga agctgaaagt aaaatagaga cagtaaaaga 600
 ctatgcaaca gctcaaagtg ctgccgatga cgaaaagaaa agaaatatag ataatttaaa 660
 aatagttaga gatgttcttc ttattattaa aaaaactatt gagaaagcca gccgatctta 720
 tgctgatgct tttgctattg caacatctag cttatcttgt agcgaattta agcaagctgt 780
 taaagagttt aatgatgctg ctaaacaata tgctaattgga aataaaggag acaatgctgt 840
 caatgttatt gtaggcacta tttctagtat gccttatgtc aaatttaaag atgagtttgc 900
 aagagcaaaa atgtttgctc gtaattatag aggagacgag gtagacaaga tgataagagc 960
 tatcgacaag 970

<210> 643
 <211> 358
 <212> PRT
 <213> Homo sapiens

<400> 643
 Lys Asn Lys Glu Val Leu Met Lys Arg Lys Ser Asn Ile Cys Ile Ser
 1 5 10 15
 Leu Leu Val Thr Ile Leu Phe Val Ser Cys Lys Phe Phe Gly Asn Lys

	20							25						30					
Ser	Ala	Ser	Lys	Glu	Lys	Glu	Glu	Thr	Ser	Phe	Ser	Asp	Thr	Ala	Ser				
		35					40					45							
Lys	Ile	Ser	Lys	Ser	Gly	Thr	Ala	Ala	Ser	Ser	Asp	Lys	Gln	Glu	Lys				
	50					55					60								
Asn	Thr	Ser	Asp	Val	Thr	Gly	Asp	Ala	Lys	Lys	His	Thr	Ser	Ser	Pro				
	65				70					75					80				
Tyr	Met	Leu	Ala	Asp	Ala	Leu	Ile	Val	Ser	Asp	Thr	Thr	Asn	Arg	Asp				
				85					90					95					
Arg	Asp	Lys	Gln	Glu	Asn	Lys	Asp	Lys	Leu	Asn	Glu	Glu	Asp	Lys	Lys				
			100					105					110						
Lys	Leu	Asn	Ala	Phe	Phe	Ser	Thr	Thr	Lys	Thr	Tyr	Gln	Ser	Ser	Leu				
		115					120					125							
Asp	Ser	Ile	Tyr	Asn	Lys	Tyr	Thr	Gly	Tyr	Tyr	Asn	Thr	Ile	Asp	Thr				
	130					135					140								
Tyr	Gly	Ser	Cys	Asp	Thr	Tyr	Arg	Ile	Glu	Cys	Phe	Ser	Val	Gly	Pro				
	145				150					155					160				
Ser	Glu	Lys	Arg	Lys	Gln	Ala	Leu	Ala	Asp	Leu	Glu	Lys	Leu	Lys	Leu				
				165					170					175					
Asp	Glu	Lys	Tyr	Thr	Gln	Leu	Ser	Thr	Met	Leu	Lys	Ser	Ala	Val	Pro				
			180					185					190						
Ser	Tyr	Tyr	Lys	Lys	Asn	Leu	Asp	Asp	Ser	Ile	Ala	Gln	Tyr	Lys	Glu				
		195					200					205							
Ala	Ile	Lys	Gln	Ala	Ile	Glu	Ala	Glu	Ser	Lys	Ile	Glu	Thr	Val	Lys				
	210					215					220								
Asp	Tyr	Ala	Thr	Ala	Gln	Ser	Ala	Ala	Asp	Asp	Glu	Lys	Lys	Arg	Asn				
	225				230				235						240				
Ile	Asp	Asn	Leu	Lys	Ile	Val	Arg	Asp	Val	Leu	Leu	Ile	Ile	Lys	Lys				
				245					250					255					
Thr	Ile	Glu	Lys	Ala	Ser	Arg	Ser	Tyr	Ala	Asp	Ala	Phe	Ala	Ile	Ala				
			260					265					270						
Thr	Ser	Ser	Leu	Ser	Cys	Ser	Glu	Phe	Lys	Gln	Ala	Val	Lys	Glu	Phe				
		275					280					285							
Asn	Asp	Ala	Ala	Lys	Gln	Tyr	Ala	Asn	Gly	Asn	Lys	Gly	Asp	Asn	Ala				
	290					295					300								
Val	Asn	Val	Ile	Val	Gly	Thr	Ile	Ser	Ser	Met	Pro	Tyr	Val	Lys	Phe				
	305				310					315					320				
Lys	Asp	Glu	Phe	Ala	Arg	Ala	Lys	Met	Phe	Ala	Arg	Asn	Tyr	Arg	Gly				
				325					330					335					
Asp	Glu	Val	Asp	Lys	Met	Ile	Arg	Ala	Ile	Asp	Lys	Leu	Cys	Asp	Val				

340

345

350

Tyr Lys Lys Val Ala Leu
355

<210> 644

<211> 323

<212> PRT

<213> Homo sapiens

<400> 644

Cys Lys Phe Phe Gly Asn Lys Ser Ala Ser Lys Glu Lys Glu Glu Thr
1 5 10 15

Ser Phe Ser Asp Thr Ala Ser Lys Ile Ser Lys Ser Gly Thr Ala Ala
20 25 30

Ser Ser Asp Lys Gln Glu Lys Asn Thr Ser Asp Val Thr Gly Asp Ala
35 40 45

Lys Lys His Thr Ser Ser Pro Tyr Met Leu Ala Asp Ala Leu Ile Val
50 55 60

Ser Asp Thr Thr Asn Arg Asp Arg Asp Lys Gln Glu Asn Lys Asp Lys
65 70 75 80

Leu Asn Glu Glu Asp Lys Lys Lys Leu Asn Ala Phe Phe Ser Thr Thr
85 90 95

Lys Thr Tyr Gln Ser Ser Leu Asp Ser Ile Tyr Asn Lys Tyr Thr Gly
100 105 110

Tyr Tyr Asn Thr Ile Asp Thr Tyr Gly Ser Cys Asp Thr Tyr Arg Ile
115 120 125

Glu Cys Phe Ser Val Gly Pro Ser Glu Lys Arg Lys Gln Ala Leu Ala
130 135 140

Asp Leu Glu Lys Leu Lys Leu Asp Glu Lys Tyr Thr Gln Leu Ser Thr
145 150 155 160

Met Leu Lys Ser Ala Val Pro Ser Tyr Tyr Lys Lys Asn Leu Asp Asp
165 170 175

Ser Ile Ala Gln Tyr Lys Glu Ala Ile Lys Gln Ala Ile Glu Ala Glu
180 185 190

Ser Lys Ile Glu Thr Val Lys Asp Tyr Ala Thr Ala Gln Ser Ala Ala
195 200 205

Asp Asp Glu Lys Lys Arg Asn Ile Asp Asn Leu Lys Ile Val Arg Asp
210 215 220

Val Leu Leu Ile Ile Lys Lys Thr Ile Glu Lys Ala Ser Arg Ser Tyr
225 230 235 240

Ala Asp Ala Phe Ala Ile Ala Thr Ser Ser Leu Ser Cys Ser Glu Phe
245 250 255

Lys Gln Ala Val Lys Glu Phe Asn Asp Ala Ala Lys Gln Tyr Ala Asn

260 265 270

Gly Asn Lys Gly Asp Asn Ala Val Asn Val Ile Val Gly Thr Ile Ser
275 280 285

Ser Met Pro Tyr Val Lys Phe Lys Asp Glu Phe Ala Arg Ala Lys Met
290 295 300

Phe Ala Arg Asn Tyr Arg Gly Asp Glu Val Asp Lys Met Ile Arg Ala
305 310 315 320

Ile Asp Lys

<210> 645
<211> 696
<212> DNA
<213> Homo sapiens

<400> 645
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ggattattaa ttttttggtg tgcaaccttt gtttggttga ttggaatttt ttattcaaat 120
aactttaaag aagagcggaa ttattcaata agcccaatag atagtgttat tatgcgtaaa 180
tgttatttta aagaatttaa gtctggactt attaaaagcg tattctttta gaaattagat 240
gtaaatgtta actctaaaaa ttttaaggag ctaaaataagg tagataaaca aaatctgcta 300
aattcttata catcttatca tatggagttt gtcgtagttg ataatggatt tttaatgaat 360
tttaaaaatg ttatttttaa tggatatagat gatgctaaat tatacgatca acgtgatatg 420
gtttacggag gatttagata ctcaaaagag gcttatttcc aaattatttg caattatgat 480
gttaaattaa ataaaatgaa acaatatact ccagcaattg tagtaaattg tttcaaaatt 540
aacattaatg atgctttatt taactcgtta ttaaagcaaa aaactttaaa agttactttg 600
atttcccata ataataaaga gtatatttta caaactaata atttcttata aaagtataat 660
tttcaaacac cagaaaagga gaatagttct tactaa 696

<210> 646
<211> 577
<212> DNA
<213> Homo sapiens

<400> 646
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taaagtgttat tttaaagaat ttaagtcttg acttattaaa agcgtattct ttaagaaatt 120
agatgtaaat gttaactcta aaaattttta ggagctaaat aaggtagata aacaaaatct 180
gctaaattct tatccatctt atcatatgga gtttgctgta gttgataatg gattttta 240
gaattttaaa aatggtattt ttaatggtat agatgatgct aaattatacg atcaacgtga 300
tatggtttac ggaggattta gatactcaaa agaggcttat ttccaaatta ttggcaatta 360
tgatgttaaa ttaaataaaa tgaaacaata tactccagca attgtagtaa atgttttcaa 420
aattaacatt aatgatgctt tatttaactc gttattaaag caaaaaactt taaaagttac 480
tttgatttcc cataataata aagagtatat ttacaaaact aataatttct tatcaaagta 540
taattttcaa acaccagaaa aggagaatag ttcttac 577

<210> 647
<211> 230
<212> PRT
<213> Homo sapiens

<400> 647
Gly Asn Met Arg Asn Ile Ser Asn Cys Ile Lys Tyr Ile Ile Leu Thr
1 5 10 15

Met Leu Ile Gly Leu Leu Ile Phe Cys Cys Ala Thr Phe Val Trp Leu

20										25					30															
Ile	Gly	Ile	Phe	Tyr	Ser	Asn	Asn	Phe	Lys	Glu	Glu	Arg	Asn	Tyr	Ser															
		35						40					45																	
Ile	Ser	Pro	Ile	Asp	Ser	Val	Ile	Met	Arg	Lys	Cys	Tyr	Phe	Lys	Glu															
		50				55					60																			
Phe	Lys	Ser	Gly	Leu	Ile	Lys	Ser	Val	Phe	Phe	Lys	Lys	Leu	Asp	Val															
		65			70					75					80															
Asn	Val	Asn	Ser	Lys	Asn	Phe	Lys	Glu	Leu	Asn	Lys	Val	Asp	Lys	Gln															
				85					90					95																
Asn	Leu	Leu	Asn	Ser	Tyr	Pro	Ser	Tyr	His	Met	Glu	Phe	Val	Val	Val															
			100					105					110																	
Asp	Asn	Gly	Phe	Leu	Met	Asn	Phe	Lys	Asn	Val	Ile	Phe	Asn	Gly	Ile															
		115					120					125																		
Asp	Asp	Ala	Lys	Leu	Tyr	Asp	Gln	Arg	Asp	Met	Val	Tyr	Gly	Gly	Phe															
		130				135					140																			
Arg	Tyr	Ser	Lys	Glu	Ala	Tyr	Phe	Gln	Ile	Ile	Gly	Asn	Tyr	Asp	Val															
					150					155					160															
Lys	Leu	Asn	Lys	Met	Lys	Gln	Tyr	Thr	Pro	Ala	Ile	Val	Val	Asn	Val															
				165					170					175																
Phe	Lys	Ile	Asn	Ile	Asn	Asp	Ala	Leu	Phe	Asn	Ser	Leu	Leu	Lys	Gln															
			180					185					190																	
Lys	Thr	Leu	Lys	Val	Thr	Leu	Ile	Ser	His	Asn	Asn	Lys	Glu	Tyr	Ile															
		195				200						205																		
Leu	Gln	Thr	Asn	Asn	Phe	Leu	Ser	Lys	Tyr	Asn	Phe	Gln	Thr	Pro	Glu															
		210				215					220																			
Lys	Glu	Asn	Ser	Ser	Tyr																									
		225			230																									

<210> 648
 <211> 192
 <212> PRT
 <213> Homo sapiens

<400> 648																														
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		1				5				10				15																
Val	Ile	Met	Arg	Lys	Cys	Tyr	Phe	Lys	Glu	Phe	Lys	Ser	Gly	Leu	Ile															
			20					25					30																	
Lys	Ser	Val	Phe	Phe	Lys	Lys	Leu	Asp	Val	Asn	Val	Asn	Ser	Lys	Asn															
			35				40					45																		
Phe	Lys	Glu	Leu	Asn	Lys	Val	Asp	Lys	Gln	Asn	Leu	Leu	Asn	Ser	Tyr															
		50				55					60																			
Pro	Ser	Tyr	His	Met	Glu	Phe	Val	Val	Val	Asp	Asn	Gly	Phe	Leu	Met															

65		70		75		80
Asn Phe Lys	Asn Val Ile Phe Asn Gly	Ile Asp Asp Ala Lys	Leu Tyr			
	85	90	95			
Asp Gln Arg	Asp Met Val Tyr Gly Gly Phe Arg Tyr Ser	Lys Glu Ala				
	100	105	110			
Tyr Phe Gln	Ile Ile Gly Asn Tyr Asp Val Lys Leu Asn Lys	Met Lys				
	115	120	125			
Gln Tyr Thr	Pro Ala Ile Val Val Asn Val Phe Lys Ile Asn Ile Asn					
	130	135	140			
Asp Ala Leu Phe Asn Ser Leu Leu Lys Gln Lys Thr Leu Lys Val Thr						
145	150	155	160			
Leu Ile Ser His Asn Asn Lys Glu Tyr Ile Leu Gln Thr Asn Asn Phe						
	165	170	175			
Leu Ser Lys Tyr Asn Phe Gln Thr Pro Glu Lys Glu Asn Ser Ser Tyr						
	180	185	190			

<210> 649

<211> 837

<212> DNA

<213> Homo sapiens

<400> 649

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tctataaata	aagaacaaaa	aaccaaagaa	aaaacatctg	aaaagcaaga	atctgaaaaa	120
caaaatattg	aaaaacaaga	gcctgaaaaa	cagaaacaaa	atgcagcaaa	aataatccct	180
acggatatcaa	ttcaaacggt	agaaataagg	gaatcaaadc	aaattccaaa	aagcattgag	240
aagtactaca	agcaagctta	tccgattcaa	acattcactc	ttgattttag	catcacaaga	300
gaaaaggaat	ttctaaaacc	agaagataaa	atcttgccca	cacaggggaa	agtggagtct	360
ttgagcatct	taataaataa	aaaattgtta	gactttaaag	ccccagaaaa	tccaaaaagc	420
tcaactttta	aaaattttcaa	agaaattaaa	aatattgaga	atttcttcca	aaatcaagac	480
ttattatttg	tcttaaccct	taaagataaa	aataacaaca	acactattaa	catcatgctc	540
aatcccccaa	acgacatcca	aaaaccctaa	gattatattt	taaaagacct	taaagacaca	600
attaaaaagg	gtactgggtga	gaaatactta	aatcctatct	atagattttca	aataaaaaaac	660
aaaaaagatt	atcattcaat	agattacaac	aaagtgacta	ttagcgaaaa	aacaatagaa	720
ttggacctac	tgctcacga	acaagtcctt	caaatgaata	aaaatttcac	taaaatttta	780
gacacaataa	cagacttaaa	taatctaaaa	ttagtaattc	aaaaagaatt	agtgttaa	837

<210> 650

<211> 724

<212> DNA

<213> Homo sapiens

<400> 650

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atctgaaaaa	caaaatattg	aaaaacaaga	gcctgaaaaa	cagaaacaaa	atgcagcaaa	120
aataatccct	acggatatcaa	ttcaaacggt	agaaataagg	gaatcaaadc	aaattccaaa	180
aagcattgag	aagtactaca	agcaagctta	tccgattcaa	acattcactc	ttgattttag	240
catcacaaga	gaaaaggaat	ttctaaaacc	agaagataaa	atcttgccca	cacaggggaa	300
agtggagtct	ttgagcatct	taataaataa	aaaattgtta	gactttaaag	ccccagaaaa	360
tccaaaaagc	tcaactttta	aaaattttcaa	agaaattaaa	aatattgaga	atttcttcca	420
aaatcaagac	ttattatttg	tcttaaccct	taaagataaa	aataacaaca	acactattaa	480
catcatgctc	aatcccccaa	acgacatcca	aaaaccctaa	gattatattt	taaaagacct	540
taaagacaca	attaaaaagg	gtactgggtga	gaaatactta	aatcctatct	atagattttca	600

aataaaaaaac aaaaaagatt atcattcaat agattacaac aaagtgacta ttagcgaaaa 660
aacaatagaa ttggacctac tgcctcacga acaagtcttt caaatgaata aaaatttcac 720
taaa 724

<210> 651
<211> 277
<212> PRT
<213> Homo sapiens

<400> 651

Met Ser Lys Lys Val Ile Leu Ile Leu Leu Glu Ile Leu Ile Leu Ser
1 5 10 15

Cys Asp Leu Ser Ile Asn Lys Glu Gln Lys Thr Lys Glu Lys Thr Ser
20 25 30

Glu Lys Gln Glu Ser Glu Lys Gln Asn Ile Glu Lys Gln Glu Pro Glu
35 40 45

Lys Gln Lys Gln Asn Ala Ala Lys Ile Ile Pro Thr Val Ser Ile Gln
50 55 60

Thr Val Glu Ile Arg Glu Ser Asn Gln Ile Pro Lys Ser Ile Glu Lys
65 70 75 80

Tyr Tyr Lys Gln Ala Tyr Pro Ile Gln Thr Phe Thr Leu Asp Phe Ser
85 90 95

Ile Thr Arg Glu Lys Glu Phe Leu Lys Pro Glu Asp Lys Ile Leu Pro
100 105 110

Thr Gln Gly Lys Val Glu Ser Leu Ser Ile Leu Ile Asn Lys Lys Leu
115 120 125

Leu Asp Phe Lys Ala Pro Glu Asn Pro Lys Ser Ser Thr Leu Lys Asn
130 135 140

Phe Lys Glu Ile Lys Asn Ile Glu Asn Phe Phe Gln Asn Gln Asp Leu
145 150 155 160

Leu Phe Val Leu Thr Leu Lys Asp Lys Asn Asn Asn Asn Thr Ile Asn
165 170 175

Ile Met Leu Asn Pro Pro Asn Asp Ile Gln Lys Pro Lys Asp Tyr Ile
180 185 190

Leu Lys Asp Leu Lys Asp Thr Ile Lys Lys Gly Thr Gly Glu Lys Tyr
195 200 205

Leu Asn Pro Ile Tyr Arg Phe Gln Ile Lys Asn Lys Lys Asp Tyr His
210 215 220

Ser Ile Asp Tyr Asn Lys Val Thr Ile Ser Glu Lys Thr Ile Glu Leu
225 230 235 240

Asp Leu Leu Pro His Glu Gln Val Phe Gln Met Asn Lys Asn Phe Thr
245 250 255

Lys Ile Leu Asp Thr Ile Thr Asp Leu Asn Asn Leu Lys Leu Val Ile
260 265 270

Gln Lys Glu Leu Val
275

<210> 652

<211> 241

<212> PRT

<213> Homo sapiens

<400> 652

Cys Asp Leu Ser Ile Asn Lys Glu Gln Lys Thr Lys Glu Lys Thr Ser
1 5 10 15

Glu Lys Gln Glu Ser Glu Lys Gln Asn Ile Glu Lys Gln Glu Pro Glu
20 25 30

Lys Gln Lys Gln Asn Ala Ala Lys Ile Ile Pro Thr Val Ser Ile Gln
35 40 45

Thr Val Glu Ile Arg Glu Ser Asn Gln Ile Pro Lys Ser Ile Glu Lys
50 55 60

Tyr Tyr Lys Gln Ala Tyr Pro Ile Gln Thr Phe Thr Leu Asp Phe Ser
65 70 75 80

Ile Thr Arg Glu Lys Glu Phe Leu Lys Pro Glu Asp Lys Ile Leu Pro
85 90 95

Thr Gln Gly Lys Val Glu Ser Leu Ser Ile Leu Ile Asn Lys Lys Leu
100 105 110

Leu Asp Phe Lys Ala Pro Glu Asn Pro Lys Ser Ser Thr Leu Lys Asn
115 120 125

Phe Lys Glu Ile Lys Asn Ile Glu Asn Phe Phe Gln Asn Gln Asp Leu
130 135 140

Leu Phe Val Leu Thr Leu Lys Asp Lys Asn Asn Asn Asn Thr Ile Asn
145 150 155 160

Ile Met Leu Asn Pro Pro Asn Asp Ile Gln Lys Pro Lys Asp Tyr Ile
165 170 175

Leu Lys Asp Leu Lys Asp Thr Ile Lys Lys Gly Thr Gly Glu Lys Tyr
180 185 190

Leu Asn Pro Ile Tyr Arg Phe Gln Ile Lys Asn Lys Lys Asp Tyr His
195 200 205

Ser Ile Asp Tyr Asn Lys Val Thr Ile Ser Glu Lys Thr Ile Glu Leu
210 215 220

Asp Leu Leu Pro His Glu Gln Val Phe Gln Met Asn Lys Asn Phe Thr
225 230 235 240

Lys

<210> 653

<211> 579

<212> DNA
 <213> Homo sapiens

<400> 653
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 aaactattgg tcgcatgtag tattggatta gtagaaagaa caaatgcagc tcttgaatcg 120
 tcctctaagg atttaaaaaa caaaatttta aaaataaaaa aagaagccac gggaaaaggt 180
 gtactttttg aagctttttac aggtctttaa accggttcca aggtaacaag tgggtggacta 240
 gccttaagag aagcaaaaagt acaagccatt gttgaaacag gaaagttcct taagataata 300
 gaagaagaag ctttaaagct taaagaaact ggaaacagtg gtcaattcct ggctatgttt 360
 gacttaatgc ttgagggttg agaatcgcta gaagacgttg gaataatagg cttaaaagcc 420
 cgtgttttag aggaatctaa aaataatcct ataaacacag ctgaaagatt gcttgccggct 480
 aaagctcaaa tagaaaatca acttaaagtg gtttaaggaaa aacaaaatat tgaaaatggt 540
 ggagagaaaa aaaataataa aagcaaaaaa aagaataa 579

<210> 654
 <211> 502
 <212> DNA
 <213> Homo sapiens

<400> 654
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 aaaaaacaaa attttaaaaa taaaaaaaga agccacggga aaaggtgtac tttttgaagc 120
 ttttacaggc cttaaaaccg gttccaaggc aacaagtggg ggactagcct taagagaagc 180
 aaaagtacaa gccattgttg aaacaggaaa gttccttaag ataatagaag aagaagcttt 240
 aaagcttaaa gaaactggaa acagtgggtca attcctggct atgtttgact taatgcttga 300
 ggtttagtaa tcgctagaag acgttggaat aataggctta aaagcccgtg ttttagagga 360
 atctaaaaat aatcctataa acacagctga aagattgctt gcggctaaag ctcaaataga 420
 aaatcaactt aaagtgggta aggaaaaaca aaatattgaa aatggtggag agaaaaaaaa 480
 taataaaagc aaaaaaaaga aa 502

<210> 655
 <211> 191
 <212> PRT
 <213> Homo sapiens

<400> 655
 Lys Glu Glu Lys Met Lys Ile Gly Lys Leu Asn Ser Ile Val Ile Ala
 1 5 10 15
 Leu Phe Phe Lys Leu Leu Val Ala Cys Ser Ile Gly Leu Val Glu Arg
 20 25 30
 Thr Asn Ala Ala Leu Glu Ser Ser Ser Lys Asp Leu Lys Asn Lys Ile
 35 40 45
 Leu Lys Ile Lys Lys Glu Ala Thr Gly Lys Gly Val Leu Phe Glu Ala
 50 55 60
 Phe Thr Gly Leu Lys Thr Gly Ser Lys Val Thr Ser Gly Gly Leu Ala
 65 70 75 80
 Leu Arg Glu Ala Lys Val Gln Ala Ile Val Glu Thr Gly Lys Phe Leu
 85 90 95
 Lys Ile Ile Glu Glu Glu Ala Leu Lys Leu Lys Glu Thr Gly Asn Ser
 100 105 110
 Gly Gln Phe Leu Ala Met Phe Asp Leu Met Leu Glu Val Val Glu Ser
 115 120 125

Leu Glu Asp Val Gly Ile Ile Gly Leu Lys Ala Arg Val Leu Glu Glu
 130 135 140

Ser Lys Asn Asn Pro Ile Asn Thr Ala Glu Arg Leu Leu Ala Ala Lys
 145 150 155 160

Ala Gln Ile Glu Asn Gln Leu Lys Val Val Lys Glu Lys Gln Asn Ile
 165 170 175

Glu Asn Gly Gly Glu Lys Lys Asn Asn Lys Ser Lys Lys Lys Lys
 180 185 190

<210> 656

<211> 167

<212> PRT

<213> Homo sapiens

<400> 656

Cys Ser Ile Gly Leu Val Glu Arg Thr Asn Ala Ala Leu Glu Ser Ser
 1 5 10 15

Ser Lys Asp Leu Lys Asn Lys Ile Leu Lys Ile Lys Lys Glu Ala Thr
 20 25 30

Gly Lys Gly Val Leu Phe Glu Ala Phe Thr Gly Leu Lys Thr Gly Ser
 35 40 45

Lys Val Thr Ser Gly Gly Leu Ala Leu Arg Glu Ala Lys Val Gln Ala
 50 55 60

Ile Val Glu Thr Gly Lys Phe Leu Lys Ile Ile Glu Glu Glu Ala Leu
 65 70 75 80

Lys Leu Lys Glu Thr Gly Asn Ser Gly Gln Phe Leu Ala Met Phe Asp
 85 90 95

Leu Met Leu Glu Val Val Glu Ser Leu Glu Asp Val Gly Ile Ile Gly
 100 105 110

Leu Lys Ala Arg Val Leu Glu Glu Ser Lys Asn Asn Pro Ile Asn Thr
 115 120 125

Ala Glu Arg Leu Leu Ala Ala Lys Ala Gln Ile Glu Asn Gln Leu Lys
 130 135 140

Val Val Lys Glu Lys Gln Asn Ile Glu Asn Gly Gly Glu Lys Lys Asn
 145 150 155 160

Asn Lys Ser Lys Lys Lys Lys
 165

<210> 657

<211> 525

<212> DNA

<213> Homo sapiens

<400> 657

taatttttaa aatttaaata ttacataat agtaatgtgt gtgggagacg tatgaaaaat 60
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aggagaaggc cttcaaagggt tttaaagtgt tctaattgggt catcaaataa agaacttaaa 180
 atttcttttg tagattcttt aaatgatgat caaaaagaag ctttgttttt tcttgaacag 240
 gtagttcttg atagcaatcc cgacaagttt aatcaaattt ttaatttaaa tgaagagaag 300
 gtaaaagaaa tgcttggttac tggttgtaag tgtttaaagg ccaaaagaaa ggctaaaatg 360
 gctcttgaga gctcaaagt tgcaaagtgt gccaatgcta aacagcaatt gctacaggtt 420
 gaaaaaactt acatagataa tttgcgacaa tcttttatga ctactaaaaa cattgaagag 480
 gcttgtaatc ttgtaaaaaa ttatgatgca tctgcttcgt tttaa 525

<210> 658

<211> 430

<212> DNA

<213> Homo sapiens

<400> 658

ttgtaaagaa ttttaattatt ctgatcttag gagaaggcct tcaaagggtt taaatgcttc 60
 taatgggtgca tcaaataaag aacttaaaat ttcttttgta gattctttaa atgatgatca 120
 aaaagaagct ttgttttttc ttgaacaggt agttcttgat agcaatcccg acaagtttaa 180
 tcaaattttt aattttaaag aagagaagggt aaaagaaatg cttgttactg ttgttaagtg 240
 tttaaaggcc aaaagaaagg ctaaaatggc tcttgagagc tcaaagtgtg caaatgttgc 300
 caatgctaaa cagcaattgc tacaggttga aaaaacttac atagataatt tgcgacaatc 360
 ttttatgact actaaaaaca ttgaagaggc ttgtaatctt gtaaaaaatt atgatgcatc 420
 tgcttcggtt 430

<210> 659

<211> 173

<212> PRT

<213> Homo sapiens

<400> 659

Phe Leu Lys Phe Lys Tyr Leu His Asn Ser Asn Val Cys Gly Arg Arg
 1 5 10 15

Met Lys Asn Ile Leu Leu Phe Val Ile Leu Leu Phe Phe Ser Cys Lys
 20 25 30

Glu Phe Asn Tyr Ser Asp Leu Arg Arg Arg Pro Ser Lys Val Leu Asn
 35 40 45

Ala Ser Asn Gly Ala Ser Asn Lys Glu Leu Lys Ile Ser Phe Val Asp
 50 55 60

Ser Leu Asn Asp Asp Gln Lys Glu Ala Leu Phe Phe Leu Glu Gln Val
 65 70 75 80

Val Leu Asp Ser Asn Pro Asp Lys Phe Asn Gln Ile Phe Asn Leu Asn
 85 90 95

Glu Glu Lys Val Lys Glu Met Leu Val Thr Val Val Lys Cys Leu Lys
 100 105 110

Ala Lys Arg Lys Ala Lys Met Ala Leu Glu Ser Ser Asn Val Ala Asn
 115 120 125

Val Ala Asn Ala Lys Gln Gln Leu Leu Gln Val Glu Lys Thr Tyr Ile
 130 135 140

Asp Asn Leu Arg Gln Ser Phe Met Thr Thr Lys Asn Ile Glu Glu Ala
 145 150 155 160

Cys Asn Leu Val Lys Asn Tyr Asp Ala Ser Ala Ser Phe

165

170

<210> 660
 <211> 143
 <212> PRT
 <213> Homo sapiens

<400> 660
 Cys Lys Glu Phe Asn Tyr Ser Asp Leu Arg Arg Arg Pro Ser Lys Val
 1 5 10 15
 Leu Asn Ala Ser Asn Gly Ala Ser Asn Lys Glu Leu Lys Ile Ser Phe
 20 25 30
 Val Asp Ser Leu Asn Asp Asp Gln Lys Glu Ala Leu Phe Phe Leu Glu
 35 40 45
 Gln Val Val Leu Asp Ser Asn Pro Asp Lys Phe Asn Gln Ile Phe Asn
 50 55 60
 Leu Asn Glu Glu Lys Val Lys Glu Met Leu Val Thr Val Val Lys Cys
 65 70 75 80
 Leu Lys Ala Lys Arg Lys Ala Lys Met Ala Leu Glu Ser Ser Asn Val
 85 90 95
 Ala Asn Val Ala Asn Ala Lys Gln Gln Leu Leu Gln Val Glu Lys Thr
 100 105 110
 Tyr Ile Asp Asn Leu Arg Gln Ser Phe Met Thr Thr Lys Asn Ile Glu
 115 120 125
 Glu Ala Cys Asn Leu Val Lys Asn Tyr Asp Ala Ser Ala Ser Phe
 130 135 140

<210> 661
 <211> 324
 <212> DNA
 <213> Homo sapiens

<400> 661
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 tctacaatat tagccttctt gttagtatta ggttggtgatt tgtcaagcaa taatgctgaa 120
 aacaaaatgg atgatatttt taattttagaa aagaaatata tggataattc aaattataaa 180
 tgtttaagta aaaatgaggc tatagttaaa aattctaaaa ttaaattagg tgtaaataat 240
 actagaagtc gttcttattc ttctagagag actaatgttt cggattccta taataaaacc 300
 tattcatatt gcaaaagcaa ctga 324

<210> 662
 <211> 229
 <212> DNA
 <213> Homo sapiens

<400> 662
 ttgtgatttg tcaagcaata atgctgaaaa caaatggat gatattttta atttagaaaa 60
 gaaatacatg gataattcaa attataaatg tttaagtaaa aatgaggcta tagttaaaaa 120
 ttctaaaatt aaattagggtg taaataatac tagaagtcgt tcttattctt ctagagagac 180
 taatgtttcg gattcctata ataaaaccta ttcattattgc aaaagcaac 229

<210> 663

<211> 106
 <212> PRT
 <213> Homo sapiens

<400> 663

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Leu Leu Lys Ser Lys Glu Lys Arg Phe Met Asn Lys Lys Phe Ser Ile
 1             5             10             15

Ser Leu Leu Ser Thr Ile Leu Ala Phe Leu Leu Val Leu Gly Cys Asp
      20             25             30

Leu Ser Ser Asn Asn Ala Glu Asn Lys Met Asp Asp Ile Phe Asn Leu
      35             40             45

Glu Lys Lys Tyr Met Asp Asn Ser Asn Tyr Lys Cys Leu Ser Lys Asn
      50             55             60

Glu Ala Ile Val Lys Asn Ser Lys Ile Lys Leu Gly Val Asn Asn Thr
      65             70             75             80

Arg Ser Arg Ser Tyr Ser Ser Arg Glu Thr Asn Val Ser Asp Ser Tyr
      85             90             95

Asn Lys Thr Tyr Ser Tyr Cys Lys Ser Asn
      100             105
  
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<210> 664
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 664

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Cys Asp Leu Ser Ser Asn Asn Ala Glu Asn Lys Met Asp Asp Ile Phe
 1             5             10             15

Asn Leu Glu Lys Lys Tyr Met Asp Asn Ser Asn Tyr Lys Cys Leu Ser
      20             25             30

Lys Asn Glu Ala Ile Val Lys Asn Ser Lys Ile Lys Leu Gly Val Asn
      35             40             45

Asn Thr Arg Ser Arg Ser Tyr Ser Ser Arg Glu Thr Asn Val Ser Asp
      50             55             60

Ser Tyr Asn Lys Thr Tyr Ser Tyr Cys Lys Ser Asn
      65             70             75
  
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<210> 665
 <211> 459
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (29)
 <223> n equals a,t,g, or c

<400> 665

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tttttactaa tgctaaacag ctgtaattct aatgatacta atactagcca aacaaaaagt 120
  
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agacaaaaaac gtgattttaac ccaaaaagaa gcaacacaag aaaaaccaa atctaaagaa 180
 gacctgctta gagaaaagct atctgaagac caaaaaacac atcttgactg gttaaaaacc 240
 gctttaactg gtgctggaga atttgataaa tttttaggat atgacgaaga caaaataaaa 300
 ggtgcactta atcatataaa gagtgaactt gataagtgtg ctggggataa ttctgaacaa 360
 caaaaagca ccttcaaaga ggtgggtaag ggggctcttg gtggcggtat agatagtttt 420
 gcaactagtg caagtagtac ctgccaaagct cagcaataa 459

<210> 666

<211> 376

<212> DNA

<213> Homo sapiens

<400> 666

ctgtaattct aatgatacta atactagcca acaaaaaagt agacaaaaaac gtgattttaac 60
 ccaaaaagaa gcaacacaag aaaaaccaa atctaaagaa gacctgctta gagaaaagct 120
 atctgaagac caaaaaacac atcttgactg gttaaaaacc gctttaactg gtgctggaga 180
 atttgataaa tttttaggat atgacgaaga caaaataaaa ggtgcactta atcatataaa 240
 gagtgaactt gataagtgtg ctggggataa ttctgaacaa caaaaagca ccttcaaaga 300
 ggtgggtaag ggggctcttg gtggcggtat agatagtttt gcaactagtg caagtagtac 360
 ctgccaaagct cagcaa 376

<210> 667

<211> 151

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 667

Ile Leu Ile Ile Lys Lys Gly Ile Xaa Met Lys Ile Ile Asn Ile Leu
 1 5 10 15

Phe Cys Leu Phe Leu Leu Met Leu Asn Ser Cys Asn Ser Asn Asp Thr
 20 25 30

Asn Thr Ser Gln Thr Lys Ser Arg Gln Lys Arg Asp Leu Thr Gln Lys
 35 40 45

Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys Glu Asp Leu Leu Arg Glu
 50 55 60

Lys Leu Ser Glu Asp Gln Lys Thr His Leu Asp Trp Leu Lys Thr Ala
 65 70 75 80

Leu Thr Gly Ala Gly Glu Phe Asp Lys Phe Leu Gly Tyr Asp Glu Asp
 85 90 95

Lys Ile Lys Gly Ala Leu Asn His Ile Lys Ser Glu Leu Asp Lys Cys
 100 105 110

Thr Gly Asp Asn Ser Glu Gln Gln Lys Ser Thr Phe Lys Glu Val Val
 115 120 125

Lys Gly Ala Leu Gly Gly Gly Ile Asp Ser Phe Ala Thr Ser Ala Ser
 130 135 140

Ser Thr Cys Gln Ala Gln Gln

145

150

<210> 668

<211> 125

<212> PRT

<213> Homo sapiens

<400> 668

Cys Asn Ser Asn Asp Thr Asn Thr Ser Gln Thr Lys Ser Arg Gln Lys
 1 5 10 15

Arg Asp Leu Thr Gln Lys Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys
 20 25 30

Glu Asp Leu Leu Arg Glu Lys Leu Ser Glu Asp Gln Lys Thr His Leu
 35 40 45

Asp Trp Leu Lys Thr Ala Leu Thr Gly Ala Gly Glu Phe Asp Lys Phe
 50 55 60

Leu Gly Tyr Asp Glu Asp Lys Ile Lys Gly Ala Leu Asn His Ile Lys
 65 70 75 80

Ser Glu Leu Asp Lys Cys Thr Gly Asp Asn Ser Glu Gln Gln Lys Ser
 85 90 95

Thr Phe Lys Glu Val Val Lys Gly Ala Leu Gly Gly Gly Ile Asp Ser
 100 105 110

Phe Ala Thr Ser Ala Ser Ser Thr Cys Gln Ala Gln Gln
 115 120 125

<210> 669

<211> 1047

<212> DNA

<213> Homo sapiens

<400> 669

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 aaaggatttg taaataagat tttagatcca gtaaaggata aaattgcttc aagtgggtaca 180
 aaagtagatg aagtagcaaa aaaattacaa gaagaagaaa aagaagaatt aatgcagggc 240
 gatgatccta atggcagtgg aataaatccg ccaccagtat tgccggaaaa tattcacaat 300
 aatgcattag tattaataagc aatagaacaa agtgatggtc aacaagaaaa aaaagtagaa 360
 gaagctgaag cttaaagttga agaaaataaa gaaaaacaag agaatacaga agaaaacatt 420
 aaagaaaaag aaataataga cgaacaaaac aaacaagaat tagctaaagc taaagaagaa 480
 gaacaacaaa aagaacaaaa agacatcaa gaagagcaac aaagaaaagc taaagcagaa 540
 aaagaaaaaa gagaaagaga agaggcagaa caacaaaaac gacaacaaga agaggaagaa 600
 aaaaggcaag ttgataacca aattaaaaca cttatagcta aaatagatga gatcaatgaa 660
 aatattgatg ttataaaatg gcaaacgact gtaggcccac aaggcggttat agatagaatt 720
 actgggacctg tgtatgatga ttttaccat ggcaataatt ctatacgcg aacttgggag 780
 gggttagaag aggaatcaga agacgaagga ttaggaaaat tattgaaaga attgagtgat 840
 gctagggacg cgctaagaac taaattaaat gaaggcaata aaccatatac tgggtacgaa 900
 gagcctaagt taaaagaaag tgtaaattgtt agcgaaatta aagaagattt agaaaaatta 960
 aaatcaaaat tagaagaagt taaaaaatat cttaaagata gttctaaatt tgaagaaatt 1020
 aaaggatata tcagtgcacg tcagtaa 1047

<210> 670

<211> 979

<212> DNA

<213> Homo sapiens

<400> 670

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atttgtaaat aagatttttag atccagtaaa ggataaaatt gcttcaagtg gtacaaaagt 120
agatgaagta gcaaaaaaat tacaagaaga agaaaaagaa gaattaatgc agggcgatga 180
tcctaattggc agtggaataa atccgccacc agtattgccg gaaaatattc acaataatgc 240
attagtatta aaagcaatag aacaaagtga tggtaacaa gaaaaaaaag tagaagaagc 300
tgaagctaaa gttgaagaaa ataaagaaaa acaagagaat acagaagaaa acattaaaga 360
aaaagaaata atagacgaac aaaacaaaca agaattagct aaagctaaag aagaagaaca 420
acaaaaagaa caaaaaagac atcaagaaga gcaacaaaga aaagctaaag cagaaaaaga 480
aaaaagagaa agagaagagg cagaacaaca aaaacgacaa caagaagagg aagaaaaaag 540
gcaagttgat aaccaaatta aaacacttat agctaaaata gatgagatca atgaaaatat 600
tgatgttata aaatggcaaa cgactgtagg cccacaaggc gttatagata gaattactgg 660
gcctgtgtat gatgatttta ccaatggcaa taattctata cgcgaaactt gggagggggtt 720
agaagaggaa tcagaagacg aaggattagg aaaattattg aaagaattga gtgatgctag 780
ggacgcgcta agaactaaat taaatgaagg caataaacca tatactgggtt acgaagagcc 840
taagttaaaa gaaagtgtaa atgttagcga aattaaagaa gatttagaaa aattaaaatc 900
aaaattagaa gaagttaaaa aatatcttaa agatagttct aaatttgaag aaattaaagg 960
atacatcagt gacagtcag                                     979
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<210> 671

<211> 347

<212> PRT

<213> Homo sapiens

<400> 671

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Glu Arg Ile Ile Met Asn Lys Lys Thr Leu Ile Ile Cys Ala Val Phe
  1             5             10             15

Ala Leu Ile Ile Ser Cys Lys Asn Phe Ala Thr Gly Lys Asp Ile Lys
      20             25             30

Gln Asn Ser Glu Gly Lys Ile Lys Gly Phe Val Asn Lys Ile Leu Asp
      35             40             45

Pro Val Lys Asp Lys Ile Ala Ser Ser Gly Thr Lys Val Asp Glu Val
      50             55             60

Ala Lys Lys Leu Gln Glu Glu Lys Glu Glu Leu Met Gln Gly Asp
      65             70             75             80

Asp Pro Asn Gly Ser Gly Ile Asn Pro Pro Pro Val Leu Pro Glu Asn
      85             90             95

Ile His Asn Asn Ala Leu Val Leu Lys Ala Ile Glu Gln Ser Asp Gly
      100            105            110

Gln Gln Glu Lys Lys Val Glu Glu Ala Glu Ala Lys Val Glu Glu Asn
      115            120            125

Lys Glu Lys Gln Glu Asn Thr Glu Glu Asn Ile Lys Glu Lys Glu Ile
      130            135            140

Ile Asp Glu Gln Asn Lys Gln Glu Leu Ala Lys Ala Lys Glu Glu Glu
      145            150            155            160

Gln Gln Lys Glu Gln Lys Arg His Gln Glu Glu Gln Gln Arg Lys Ala
      165            170            175
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Lys Ala Glu Lys Glu Lys Arg Glu Arg Glu Glu Ala Glu Gln Gln Lys
 180 185 190
 Arg Gln Gln Glu Glu Glu Glu Lys Arg Gln Val Asp Asn Gln Ile Lys
 195 200 205
 Thr Leu Ile Ala Lys Ile Asp Glu Ile Asn Glu Asn Ile Asp Val Ile
 210 215 220
 Lys Trp Gln Thr Thr Val Gly Pro Gln Gly Val Ile Asp Arg Ile Thr
 225 230 235 240
 Gly Pro Val Tyr Asp Asp Phe Thr Asn Gly Asn Asn Ser Ile Arg Glu
 245 250 255
 Thr Trp Glu Gly Leu Glu Glu Glu Ser Glu Asp Glu Gly Leu Gly Lys
 260 265 270
 Leu Leu Lys Glu Leu Ser Asp Ala Arg Asp Ala Leu Arg Thr Lys Leu
 275 280 285
 Asn Glu Gly Asn Lys Pro Tyr Thr Gly Tyr Glu Glu Pro Lys Leu Lys
 290 295 300
 Glu Ser Val Asn Val Ser Glu Ile Lys Glu Asp Leu Glu Lys Leu Lys
 305 310 315 320
 Ser Lys Leu Glu Glu Val Lys Lys Tyr Leu Lys Asp Ser Ser Lys Phe
 325 330 335
 Glu Glu Ile Lys Gly Tyr Ile Ser Asp Ser Gln
 340 345
 <210> 672
 <211> 326
 <212> PRT
 <213> Homo sapiens
 <400> 672
 Cys Lys Asn Phe Ala Thr Gly Lys Asp Ile Lys Gln Asn Ser Glu Gly
 1 5 10 15
 Lys Ile Lys Gly Phe Val Asn Lys Ile Leu Asp Pro Val Lys Asp Lys
 20 25 30
 Ile Ala Ser Ser Gly Thr Lys Val Asp Glu Val Ala Lys Lys Leu Gln
 35 40 45
 Glu Glu Glu Lys Glu Glu Leu Met Gln Gly Asp Asp Pro Asn Gly Ser
 50 55 60
 Gly Ile Asn Pro Pro Pro Val Leu Pro Glu Asn Ile His Asn Asn Ala
 65 70 75 80
 Leu Val Leu Lys Ala Ile Glu Gln Ser Asp Gly Gln Gln Glu Lys Lys
 85 90 95
 Val Glu Glu Ala Glu Ala Lys Val Glu Glu Asn Lys Glu Lys Gln Glu
 100 105 110

Asn Thr Glu Glu Asn Ile Lys Glu Lys Glu Ile Ile Asp Glu Gln Asn
 115 120 125

Lys Gln Glu Leu Ala Lys Ala Lys Glu Glu Glu Gln Gln Lys Glu Gln
 130 135 140

Lys Arg His Gln Glu Glu Gln Gln Arg Lys Ala Lys Ala Glu Lys Glu
 145 150 155 160

Lys Arg Glu Arg Glu Glu Ala Glu Gln Gln Lys Arg Gln Gln Glu Glu
 165 170 175

Glu Glu Lys Arg Gln Val Asp Asn Gln Ile Lys Thr Leu Ile Ala Lys
 180 185 190

Ile Asp Glu Ile Asn Glu Asn Ile Asp Val Ile Lys Trp Gln Thr Thr
 195 200 205

Val Gly Pro Gln Gly Val Ile Asp Arg Ile Thr Gly Pro Val Tyr Asp
 210 215 220

Asp Phe Thr Asn Gly Asn Asn Ser Ile Arg Glu Thr Trp Glu Gly Leu
 225 230 235 240

Glu Glu Glu Ser Glu Asp Glu Gly Leu Gly Lys Leu Leu Lys Glu Leu
 245 250 255

Ser Asp Ala Arg Asp Ala Leu Arg Thr Lys Leu Asn Glu Gly Asn Lys
 260 265 270

Pro Tyr Thr Gly Tyr Glu Glu Pro Lys Leu Lys Glu Ser Val Asn Val
 275 280 285

Ser Glu Ile Lys Glu Asp Leu Glu Lys Leu Lys Ser Lys Leu Glu Glu
 290 295 300

Val Lys Lys Tyr Leu Lys Asp Ser Ser Lys Phe Glu Glu Ile Lys Gly
 305 310 315 320

Tyr Ile Ser Asp Ser Gln
 325

<210> 673
 <211> 522
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (506)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (510)
 <223> n equals a,t,g, or c

<400> 673
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caacaaacaa aaagcaggaa aaaacgtgat ttaagccaag aagaactgcc acaacaagaa 180
 aaaatcactt taacatccga cgaagaaaaa atgtttactt cattaatcaa tgtgttttaa 240
 tacacaattg aaaaattaaa caatgaaata caaggggtgca tgaatggaaa caaaagtaaa 300
 tgtaatgact tctttgattg gctttctgaa gatattcaaa aacaaaaaga attagctggg 360
 gcttttacca aggtttacaa cttcttaaaa tcaaaagcac aaaatgaaac ttttgatact 420
 tatattaaag gagctattga ttgtaaaaaa aacactccac aagattgtaa taaaaataat 480
 gaaatatggg gaggtggaca acttantagn gcaatatttt ag 522

<210> 674

<211> 403

<212> DNA

<213> Homo sapiens

<400> 674

ctgtaattcc aatgataatg acactttaaa aaacaatgcc caacaaacaa aaagcaggaa 60
 aaaacgtgat ttaagccaag aagaactgcc acaacaagaa aaaatcactt taacatccga 120
 cgaagaaaaa atgtttactt cattaatcaa tgtgttttaa tacacaattg aaaaattaaa 180
 caatgaaata caaggggtgca tgaatggaaa caaaagtaaa tgtaatgact tctttgattg 240
 gctttctgaa gatattcaaa aacaaaaaga attagctggg gcttttacca aggtttacaa 300
 cttcttaaaa tcaaaagcac aaaatgaaac ttttgatact tatattaaag gagctattga 360
 ttgtaaaaaa aacactccac aagattgtaa taaaaataat gaa 403

<210> 675

<211> 172

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (168)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (169)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 675

Ile Leu Ile Ile Lys Lys Gly Val Thr Met Lys Ile Ile Asn Ile Leu
 1 5 10 15

Phe Cys Ile Ser Leu Leu Leu Leu Asn Ser Cys Asn Ser Asn Asp Asn
 20 25 30

Asp Thr Leu Lys Asn Asn Ala Gln Gln Thr Lys Ser Arg Lys Lys Arg
 35 40 45

Asp Leu Ser Gln Glu Glu Leu Pro Gln Gln Glu Lys Ile Thr Leu Thr
 50 55 60

Ser Asp Glu Glu Lys Met Phe Thr Ser Leu Ile Asn Val Phe Lys Tyr
 65 70 75 80

Thr Ile Glu Lys Leu Asn Asn Glu Ile Gln Gly Cys Met Asn Gly Asn
 85 90 95

Lys Ser Lys Cys Asn Asp Phe Phe Asp Trp Leu Ser Glu Asp Ile Gln
 100 105 110

Lys Gln Lys Glu Leu Ala Gly Ala Phe Thr Lys Val Tyr Asn Phe Leu

115 120 125
 Lys Ser Lys Ala Gln Asn Glu Thr Phe Asp Thr Tyr Ile Lys Gly Ala
 130 135 140
 Ile Asp Cys Lys Lys Asn Thr Pro Gln Asp Cys Asn Lys Asn Asn Glu
 145 150 155 160
 Ile Trp Gly Gly Gly Gln Leu Xaa Xaa Ala Ile Phe
 165 170

<210> 676
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 676
 Cys Asn Ser Asn Asp Asn Asp Thr Leu Lys Asn Asn Ala Gln Gln Thr
 1 5 10 15
 Lys Ser Arg Lys Lys Arg Asp Leu Ser Gln Glu Glu Leu Pro Gln Gln
 20 25 30
 Glu Lys Ile Thr Leu Thr Ser Asp Glu Glu Lys Met Phe Thr Ser Leu
 35 40 45
 Ile Asn Val Phe Lys Tyr Thr Ile Glu Lys Leu Asn Asn Glu Ile Gln
 50 55 60
 Gly Cys Met Asn Gly Asn Lys Ser Lys Cys Asn Asp Phe Phe Asp Trp
 65 70 75 80
 Leu Ser Glu Asp Ile Gln Lys Gln Lys Glu Leu Ala Gly Ala Phe Thr
 85 90 95
 Lys Val Tyr Asn Phe Leu Lys Ser Lys Ala Gln Asn Glu Thr Phe Asp
 100 105 110
 Thr Tyr Ile Lys Gly Ala Ile Asp Cys Lys Lys Asn Thr Pro Gln Asp
 115 120 125
 Cys Asn Lys Asn Asn Glu
 130

<210> 677
 <211> 1605
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1535)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (1567)
 <223> n equals a,t,g, or c

<220>

<221> misc_feature
 <222> (1571)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (1593)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (1594)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (1599)
 <223> n equals a,t,g, or c

<400> 677
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 ttaacaactt tctttgtttt tattaattgt aaaagccaag ttgctgataa ggcgagtgtg 120
 acggggattg ctaagggaat aaaggagatt gttgaagctg ctggggggag tgaaaagctg 180
 aaagttgctg ctgctgaagg ggagaataat gaaaaggcag ggaagttgtt tgggaaggct 240
 ggtgctggta atgctgggga cagtgaaggct gctagcaagg cggctggtgc tgtagtgct 300
 gttagtgggg agcagatatt aagtgcgatt gttaaggctg ctggtgaggc tgcgcaggat 360
 ggagagaagc ctggggaggc taaaaatccg attgctgctg ctattgggaa gggtaatgag 420
 gatggtgcgg agtttaagga tgagatgaag aaggatgatc agattgctgc tgctattgct 480
 ttgaggggga tggctaagga tggaaagttt gctgtgaaga atgatgagaa agggaaggct 540
 gagggggcta ttaagggagc tggcgagttg ttggataagc tggtaaaagc tgtaaagaca 600
 gctgaggggg cttcaagtgg tactgctgca attggagaag ttgtggctga tgataatgct 660
 gcgaaggttg ctgataaggc gagtgtgaag gggattgcta aggggataaa ggagattggt 720
 gaagctgctg gggggagtaa aaagctgaaa gttgctgctg ctaaagaggg caatgaaaag 780
 gcagggaagt tgtttgaggaa agttgatgct gctcatgctg gggacagtga ggctgctagc 840
 aaggcggctg gtgctgttag tgctgttagt ggggagcaga tattaagtgc gattgttaag 900
 gctgctggtg cggctgctgg tgatcaggag ggaaagaagc ctggggatgc taaaaatccg 960
 attgctgctg ctattgggaa gggatgatgc gagaatggtg cggagtttaa tcatgatggg 1020
 atgaagaagg atgatcagat tgctgctgct attgctttga ggggatggc taaggatgga 1080
 aagtttgctg tgaagagtgg tgggtggtgag aaagggaagg ctgagggggc tattaaggga 1140
 gctgctgagt tgttggataa gctggtaaaa gctgtaaaaga cagctgaggg ggcttcaagt 1200
 ggtactgatg caattggaga agttgtggct aatgctggtg ctgcaaaggt tgctgataag 1260
 gcgagtgtga cggggattgc taaggggata aaggagattg ttgaagctgc tggggggagt 1320
 gaaaagctga aagttgctgc tgctacaggg gagagtaata aaggggcagg gaagttggtt 1380
 gggaaggctg gtgctggtgc taatgctggg gacagtgagg ctgctagcaa ggcggctggg 1440
 gctgttagtg ctgttagtg ggagcagata ttaagtgcga ttgttaaggc tgctgatgcg 1500
 gctgatcagg agggaaagaa gcctggggat gctanaaatc cgattgctgc tgctattggg 1560
 aagggtnatg nggagaatgg tgcggagttt aannatgang gatga 1605

<210> 678
 <211> 469
 <212> DNA
 <213> Homo sapiens

<400> 678
 ttgtaaaagc caagttgctg ataaggcgag tgtgacgggg attgctaagg gaataaagga 60
 gattgttgaa gctgctgggg ggagtgaaaa gctgaaagtt gctgctgctg aaggggagaa 120
 taatgaaaag gcagggaagt tgtttgaggaa ggctggtgct ggtaatgctg gggacagtga 180
 ggctgctagc aaggcggctg gtgctgttag tgctgttagt ggggagcaga tattaagtgc 240
 gattgttaag gctgctggtg aggctgcgca ggatggagag aagcctgggg aggctaaaaa 300
 tccgattgct gctgctattg ggaagggtaa tgagatgggt gcggagttta aggatgagat 360

gaagaaggat gatcagattg ctgctgctat tgctttgagg gggatggcta aggatggaaa 420
 gtttgctgtg aagaatgatg agaaagggaa ggctgagggg gctattaag 469

<210> 679
 <211> 533
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (511)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
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 <222> (522)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
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 <222> (523)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (530)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (531)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (532)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 679
 Met Phe Lys Thr Ile Ile Lys Gln Lys Asn Met Lys Lys Ile Ser Ser
 1 5 10 15

Ala Ile Leu Leu Thr Thr Phe Phe Val Phe Ile Asn Cys Lys Ser Gln
 20 25 30

Val Ala Asp Lys Ala Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu
 35 40 45

Ile Val Glu Ala Ala Gly Gly Ser Glu Lys Leu Lys Val Ala Ala Ala
 50 55 60

Glu Gly Glu Asn Asn Glu Lys Ala Gly Lys Leu Phe Gly Lys Ala Gly
 65 70 75 80

Ala Gly Asn Ala Gly Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala
 85 90 95

Val Ser Ala Val Ser Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala
 100 105 110

Ala Gly Glu Ala Ala Gln Asp Gly Glu Lys Pro Gly Glu Ala Lys Asn
 115 120 125
 Pro Ile Ala Ala Ala Ile Gly Lys Gly Asn Glu Asp Gly Ala Glu Phe
 130 135 140
 Lys Asp Glu Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu
 145 150 155 160
 Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Asn Asp Glu Lys
 165 170 175
 Gly Lys Ala Glu Gly Ala Ile Lys Gly Ala Gly Glu Leu Leu Asp Lys
 180 185 190
 Leu Val Lys Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly Thr Ala
 195 200 205
 Ala Ile Gly Glu Val Val Ala Asp Asp Asn Ala Ala Lys Val Ala Asp
 210 215 220
 Lys Ala Ser Val Lys Gly Ile Ala Lys Gly Ile Lys Glu Ile Val Glu
 225 230 235 240
 Ala Ala Gly Gly Ser Lys Lys Leu Lys Val Ala Ala Ala Lys Glu Gly
 245 250 255
 Asn Glu Lys Ala Gly Lys Leu Phe Gly Lys Val Asp Ala Ala His Ala
 260 265 270
 Gly Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala Val Ser Ala Val
 275 280 285
 Ser Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala Ala Gly Ala Ala
 290 295 300
 Ala Gly Asp Gln Glu Gly Lys Lys Pro Gly Asp Ala Lys Asn Pro Ile
 305 310 315 320
 Ala Ala Ala Ile Gly Lys Gly Asp Ala Glu Asn Gly Ala Glu Phe Asn
 325 330 335
 His Asp Gly Met Lys Lys Asp Asp Gln Ile Ala Ala Ala Ile Ala Leu
 340 345 350
 Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys Ser Gly Gly Gly
 355 360 365
 Glu Lys Gly Lys Ala Glu Gly Ala Ile Lys Gly Ala Ala Glu Leu Leu
 370 375 380
 Asp Lys Leu Val Lys Ala Val Lys Thr Ala Glu Gly Ala Ser Ser Gly
 385 390 395 400
 Thr Asp Ala Ile Gly Glu Val Val Ala Asn Ala Gly Ala Ala Lys Val
 405 410 415
 Ala Asp Lys Ala Ser Val Thr Gly Ile Ala Lys Gly Ile Lys Glu Ile
 420 425 430

Val Glu Ala Ala Gly Gly Ser Glu Lys Leu Lys Val Ala Ala Ala Thr
 435 440 445
 Gly Glu Ser Asn Lys Gly Ala Gly Lys Leu Phe Gly Lys Ala Gly Ala
 450 455 460
 Gly Ala Asn Ala Gly Asp Ser Glu Ala Ala Ser Lys Ala Ala Gly Ala
 465 470 475 480
 Val Ser Ala Val Ser Gly Glu Gln Ile Leu Ser Ala Ile Val Lys Ala
 485 490 495
 Ala Asp Ala Ala Asp Gln Glu Gly Lys Lys Pro Gly Asp Ala Xaa Asn
 500 505 510
 Pro Ile Ala Ala Ala Ile Gly Lys Gly Xaa Xaa Glu Asn Gly Ala Glu
 515 520 525
 Phe Xaa Xaa Xaa Gly
 530

<210> 680
 <211> 156
 <212> PRT
 <213> Homo sapiens

<400> 680
 Cys Lys Ser Gln Val Ala Asp Lys Ala Ser Val Thr Gly Ile Ala Lys
 1 5 10 15
 Gly Ile Lys Glu Ile Val Glu Ala Ala Gly Gly Ser Glu Lys Leu Lys
 20 25 30
 Val Ala Ala Ala Glu Gly Glu Asn Asn Glu Lys Ala Gly Lys Leu Phe
 35 40 45
 Gly Lys Ala Gly Ala Gly Asn Ala Gly Asp Ser Glu Ala Ala Ser Lys
 50 55 60
 Ala Ala Gly Ala Val Ser Ala Val Ser Gly Glu Gln Ile Leu Ser Ala
 65 70 75 80
 Ile Val Lys Ala Ala Gly Glu Ala Ala Gln Asp Gly Glu Lys Pro Gly
 85 90 95
 Glu Ala Lys Asn Pro Ile Ala Ala Ala Ile Gly Lys Gly Asn Glu Asp
 100 105 110
 Gly Ala Glu Phe Lys Asp Glu Met Lys Lys Asp Asp Gln Ile Ala Ala
 115 120 125
 Ala Ile Ala Leu Arg Gly Met Ala Lys Asp Gly Lys Phe Ala Val Lys
 130 135 140
 Asn Asp Glu Lys Gly Lys Ala Glu Gly Ala Ile Lys
 145 150 155

<210> 681
 <211> 1125
 <212> DNA

<213> Homo sapiens

<400> 681

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tagaaattca aaacaaagga gaaaacaaaa agtatgaata aaaaaatatt gattatTTTT 60
gctgtTTTTg cacttataat ttcttgtaaa aattatgcaa ctggtaaaga tataaaacaa 120
aatgcaaaag ggaaaattaa aggattttta gataagggtt tagatccagc aaaagataaa 180
attacttcaa gtagttcaaa agtagatgaa ttagcaaaaa aattacaaga agaagatgaa 240
gataatgaat taatgcaggg cgatgatcct aataacagag caatagcact gttaccagta 300
ttgccgaaa atagtcatga caatccacca gtaccaaaaag taaaagcagc agcacaaagt 360
ggtggtcaac aagaagacca aaaagcaaaa gaattctaaag ataaagttga ggaagaaaaa 420
gaagttgtag aggagaaaaa agaagaacaa gatagtaaaa aagaaaaagt ggagaagcaa 480
agtcaaaagc aaaaagaaga agagagaaac tctaaagaag aacaacaaaa acaagaagaa 540
gcaaaagcta gagcagatag agaaagagaa gaacgactaa aacaacaaga acaaaaaaga 600
caacaggaag aagctagggt taaagcagaa aaagaaaaac aagaaagaga ggaacaacaa 660
aaacaagaag aagaaaagaa agttaaatat aaaattaaaa cacttacaga caaaatagat 720
gaaataaata aggatattga tgggtataaat ggtaaaacaa ttgtaggagc agaagaagtt 780
atagataaaa ttacggggcc tgtatatgat gattttactg atgggaataa agctatatat 840
aaaacttggg gagatttaga ggatgaagaa ggcgaagaat taggaaaatt attgaaagaa 900
ttgagtata ctagacataa ttttaagaacc aaattaaatg agggtaataa agcatatatt 960
gttctagaaa aggagcctaa tttaaaagaa aatgtaaatg ttagtgatat tcaatcagat 1020
ttagaaaaat taaaatcagg attagaagaa gttaaaaaat attttgaaaa tgaagataat 1080
tttgaagaaa ttaaaggata cattgaggat agtaattcat attga 1125
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<210> 682

<211> 1039

<212> DNA

<213> Homo sapiens

<400> 682

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ttgtaaaaat tatgcaactg gtaaagatat aaaacaaaat gcaaaaggga aaattaaagg 60
atTTTTtagat aaggTTTTtag atccagcaaa agataaaaatt acttcaagta gttcaaaagt 120
agatgaatta gcaaaaaaat tacaagaaga agatgaagat aatgaattaa tgcaggggcga 180
tgatcctaata aacagagcaa tagcactgtt accagtattg ccggaaaata gtcatgacaa 240
tccaccagta ccaaaagtaa aagcagcagc acaaagtggg ggtcaacaag aagacaaaaa 300
agcaaaagaa tctaaagata aagttgagga agaaaaagaa gttgtagagg agaaaaaga 360
agaacaagat agtaaaaaag aaaaagtggg gaagcaaagt caaaagcaaa aagaagaaga 420
gagaaactct aaagaagaac aacaaaaaca agaagaagca aaagctagag cagatagaga 480
aagagaagaa cgactaaaac aacaagaaca aaaaagacaa caggaagaag ctaggggttaa 540
agcagaaaaa gaaaaacaag aaagagagga acaacaaaaa caagaagaag aaaagaaagt 600
taaataataa attaaaacac ttacagacaa aatagatgaa ataaataagg atattgatgg 660
tataaatggt aaaacaattg taggagcaga agaagttata gataaaatta cggggcctgt 720
atatgatgat ttactgatg ggaataaagc tatatacaaa acttggggag atttagagga 780
tgaagaaggc gaagaattag gaaaattatt gaaagaattg agtgatacta gacataattt 840
aagaacaaaa ttaaagagg gtaataaagc atatattgtt ctagaaaagg agcctaattt 900
aaaagaaaat gttaaagtta gtgatattca atcagattta gaaaaattaa aatcaggatt 960
agaagaagtt aaaaaatatt ttgaaaatga agataatttt gaagaaatta aaggatacat 1020
tgaggatagt aattcatat 1039
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<210> 683

<211> 373

<212> PRT

<213> Homo sapiens

<400> 683

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Lys Phe Lys Thr Lys Glu Lys Thr Lys Ser Met Asn Lys Lys Ile Leu
  1                      5                      10                      15
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Ile Ile Phe Ala Val Phe Ala Leu Ile Ile Ser Cys Lys Asn Tyr Ala
                20                      25                      30
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Thr Gly Lys Asp Ile Lys Gln Asn Ala Lys Gly Lys Ile Lys Gly Phe
 35 40 45
 Leu Asp Lys Val Leu Asp Pro Ala Lys Asp Lys Ile Thr Ser Ser Ser
 50 55 60
 Ser Lys Val Asp Glu Leu Ala Lys Lys Leu Gln Glu Glu Asp Glu Asp
 65 70 75 80
 Asn Glu Leu Met Gln Gly Asp Asp Pro Asn Asn Arg Ala Ile Ala Leu
 85 90 95
 Leu Pro Val Leu Pro Glu Asn Ser His Asp Asn Pro Pro Val Pro Lys
 100 105 110
 Val Lys Ala Ala Ala Gln Ser Gly Gly Gln Gln Glu Asp Gln Lys Ala
 115 120 125
 Lys Glu Ser Lys Asp Lys Val Glu Glu Glu Lys Glu Val Val Glu Glu
 130 135 140
 Lys Lys Glu Glu Gln Asp Ser Lys Lys Glu Lys Val Glu Lys Gln Ser
 145 150 155 160
 Gln Lys Gln Lys Glu Glu Glu Arg Asn Ser Lys Glu Glu Gln Gln Lys
 165 170 175
 Gln Glu Glu Ala Lys Ala Arg Ala Asp Arg Glu Arg Glu Glu Arg Leu
 180 185 190
 Lys Gln Gln Glu Gln Lys Arg Gln Gln Glu Glu Ala Arg Val Lys Ala
 195 200 205
 Glu Lys Glu Lys Gln Glu Arg Glu Glu Gln Gln Lys Gln Glu Glu Glu
 210 215 220
 Lys Lys Val Lys Tyr Lys Ile Lys Thr Leu Thr Asp Lys Ile Asp Glu
 225 230 235 240
 Ile Asn Lys Asp Ile Asp Gly Ile Asn Gly Lys Thr Ile Val Gly Ala
 245 250 255
 Glu Glu Val Ile Asp Lys Ile Thr Gly Pro Val Tyr Asp Asp Phe Thr
 260 265 270
 Asp Gly Asn Lys Ala Ile Tyr Lys Thr Trp Gly Asp Leu Glu Asp Glu
 275 280 285
 Glu Gly Glu Glu Leu Gly Lys Leu Leu Lys Glu Leu Ser Asp Thr Arg
 290 295 300
 His Asn Leu Arg Thr Lys Leu Asn Glu Gly Asn Lys Ala Tyr Ile Val
 305 310 315 320
 Leu Glu Lys Glu Pro Asn Leu Lys Glu Asn Val Asn Val Ser Asp Ile
 325 330 335
 Gln Ser Asp Leu Glu Lys Leu Lys Ser Gly Leu Glu Glu Val Lys Lys
 340 345 350

Tyr Phe Glu Asn Glu Asp Asn Phe Glu Glu Ile Lys Gly Tyr Ile Glu
 355 360 365

Asp Ser Asn Ser Tyr
 370

<210> 684

<211> 346

<212> PRT

<213> Homo sapiens

<400> 684

Cys Lys Asn Tyr Ala Thr Gly Lys Asp Ile Lys Gln Asn Ala Lys Gly
 1 5 10 15

Lys Ile Lys Gly Phe Leu Asp Lys Val Leu Asp Pro Ala Lys Asp Lys
 20 25 30

Ile Thr Ser Ser Ser Ser Lys Val Asp Glu Leu Ala Lys Lys Leu Gln
 35 40 45

Glu Glu Asp Glu Asp Asn Glu Leu Met Gln Gly Asp Asp Pro Asn Asn
 50 55 60

Arg Ala Ile Ala Leu Leu Pro Val Leu Pro Glu Asn Ser His Asp Asn
 65 70 75 80

Pro Pro Val Pro Lys Val Lys Ala Ala Ala Gln Ser Gly Gly Gln Gln
 85 90 95

Glu Asp Gln Lys Ala Lys Glu Ser Lys Asp Lys Val Glu Glu Glu Lys
 100 105 110

Glu Val Val Glu Glu Lys Lys Glu Glu Gln Asp Ser Lys Lys Glu Lys
 115 120 125

Val Glu Lys Gln Ser Gln Lys Gln Lys Glu Glu Glu Arg Asn Ser Lys
 130 135 140

Glu Glu Gln Gln Lys Gln Glu Glu Ala Lys Ala Arg Ala Asp Arg Glu
 145 150 155 160

Arg Glu Glu Arg Leu Lys Gln Gln Glu Gln Lys Arg Gln Gln Glu Glu
 165 170 175

Ala Arg Val Lys Ala Glu Lys Glu Lys Gln Glu Arg Glu Glu Gln Gln
 180 185 190

Lys Gln Glu Glu Glu Lys Lys Val Lys Tyr Lys Ile Lys Thr Leu Thr
 195 200 205

Asp Lys Ile Asp Glu Ile Asn Lys Asp Ile Asp Gly Ile Asn Gly Lys
 210 215 220

Thr Ile Val Gly Ala Glu Glu Val Ile Asp Lys Ile Thr Gly Pro Val
 225 230 235 240

Tyr Asp Asp Phe Thr Asp Gly Asn Lys Ala Ile Tyr Lys Thr Trp Gly
 245 250 255

Asp Leu Glu Asp Glu Glu Gly Glu Glu Leu Gly Lys Leu Leu Lys Glu
 260 265 270
 Leu Ser Asp Thr Arg His Asn Leu Arg Thr Lys Leu Asn Glu Gly Asn
 275 280 285
 Lys Ala Tyr Ile Val Leu Glu Lys Glu Pro Asn Leu Lys Glu Asn Val
 290 295 300
 Asn Val Ser Asp Ile Gln Ser Asp Leu Glu Lys Leu Lys Ser Gly Leu
 305 310 315 320
 Glu Glu Val Lys Lys Tyr Phe Glu Asn Glu Asp Asn Phe Glu Glu Ile
 325 330 335
 Lys Gly Tyr Ile Glu Asp Ser Asn Ser Tyr
 340 345

<210> 685
 <211> 696
 <212> DNA
 <213> Homo sapiens

<400> 685
 taacttatga ataagaaaat gaaaatgttt attatttgtg ctgtttttgc attgatgatt 60
 tcttgcaaga attatgcaag tgggtgaaaat ctaaaaaatt cagaacaaaa tctagaaagt 120
 tcagaacaaa atgtaaaaaa aacagaacaa gagataaaaa aacaagttga aggattttta 180
 gaaattctag agacaaaaga tttatctaaa ttagatgaaa aagatacaaa agaaattgaa 240
 aaacaaattc aagaattaaa gaataaaaata gaaaaattag attctaaaaa aacttctatt 300
 gaaacatatt ctgagtatga agaaaaaata aacaaaataa aagaaaaatt gaaaggaaaa 360
 ggacttgaag ataaatttaa ggagcttgaa gagagtttag caaagaaaaa gggggagaga 420
 aaaaaagctt tacaagagggc caaacagaaa tttgaagaat ataaaaaaca agtagatact 480
 tcaactggga aaactcaagg cgacaggtct aaaaaccgag gtggtgttgg agtgcaagct 540
 tggcagtgtg ccaatgaatt aggtttgggt gtaagttatt ctaatggcgg cagtgacaac 600
 agcaatactg atgaattagc aaacaaagtt atagatgatt ctcttaaaaa gattgaagaa 660
 gaacttaagg gaatagaaga agataaaaaa gaataa 696

<210> 686
 <211> 631
 <212> DNA
 <213> Homo sapiens

<400> 686
 ttgcaagaat tatgcaagt gtgaaaatct aaaaaattca gaacaaaatc tagaaagttc 60
 agaacaaaat gtaaaaaaaa cagaacaaga gataaaaaaa caagttgaag gattttttaga 120
 aattctagag acaaaaagatt tatctaaatt agatgaaaaa gatacaaaag aaattgaaaa 180
 acaaattcaa gaattaaaga ataaaataga aaaattagat tctaaaaaaa cttctattga 240
 aacatattct gagtatgaag aaaaaataaa caaaataaaa gaaaaattga aaggaaaaagg 300
 acttgaagat aaatttaagg agcttgaaga gagtttagca aagaaaaagg gggagagaaa 360
 aaaagcttta caagaggcca aacagaaatt tgaagaatat aaaaaacaag tagatacttc 420
 aactgggaaa actcaaggcg acaggtctaa aaaccgaggt ggtgttggag tgcaagcttg 480
 gcagtgtgcc aatgaattag gtttgggtgt aagttattct aatggcggca gtgacaacag 540
 caatactgat gaattagcaa acaaagttat agatgattct cttaaaaaa ttgaagaaga 600
 acttaaggga atagaagaag ataaaaaaga a 631

<210> 687
 <211> 230
 <212> PRT
 <213> Homo sapiens

<400> 687

Leu Met Asn Lys Lys Met Lys Met Phe Ile Ile Cys Ala Val Phe Ala
1 5 10 15

Leu Met Ile Ser Cys Lys Asn Tyr Ala Ser Gly Glu Asn Leu Lys Asn
20 25 30

Ser Glu Gln Asn Leu Glu Ser Ser Glu Gln Asn Val Lys Lys Thr Glu
35 40 45

Gln Glu Ile Lys Lys Gln Val Glu Gly Phe Leu Glu Ile Leu Glu Thr
50 55 60

Lys Asp Leu Ser Lys Leu Asp Glu Lys Asp Thr Lys Glu Ile Glu Lys
65 70 75 80

Gln Ile Gln Glu Leu Lys Asn Lys Ile Glu Lys Leu Asp Ser Lys Lys
85 90 95

Thr Ser Ile Glu Thr Tyr Ser Glu Tyr Glu Glu Lys Ile Asn Lys Ile
100 105 110

Lys Glu Lys Leu Lys Gly Lys Gly Leu Glu Asp Lys Phe Lys Glu Leu
115 120 125

Glu Glu Ser Leu Ala Lys Lys Lys Gly Glu Arg Lys Lys Ala Leu Gln
130 135 140

Glu Ala Lys Gln Lys Phe Glu Glu Tyr Lys Lys Gln Val Asp Thr Ser
145 150 155 160

Thr Gly Lys Thr Gln Gly Asp Arg Ser Lys Asn Arg Gly Gly Val Gly
165 170 175

Val Gln Ala Trp Gln Cys Ala Asn Glu Leu Gly Leu Gly Val Ser Tyr
180 185 190

Ser Asn Gly Gly Ser Asp Asn Ser Asn Thr Asp Glu Leu Ala Asn Lys
195 200 205

Val Ile Asp Asp Ser Leu Lys Lys Ile Glu Glu Glu Leu Lys Gly Ile
210 215 220

Glu Glu Asp Lys Lys Glu
225 230

<210> 688

<211> 210

<212> PRT

<213> Homo sapiens

<400> 688

Cys Lys Asn Tyr Ala Ser Gly Glu Asn Leu Lys Asn Ser Glu Gln Asn
1 5 10 15

Leu Glu Ser Ser Glu Gln Asn Val Lys Lys Thr Glu Gln Glu Ile Lys
20 25 30

Lys Gln Val Glu Gly Phe Leu Glu Ile Leu Glu Thr Lys Asp Leu Ser
35 40 45

Lys Leu Asp Glu Lys Asp Thr Lys Glu Ile Glu Lys Gln Ile Gln Glu
50 55 60

Leu Lys Asn Lys Ile Glu Lys Leu Asp Ser Lys Lys Thr Ser Ile Glu
65 70 75 80

Thr Tyr Ser Glu Tyr Glu Glu Lys Ile Asn Lys Ile Lys Glu Lys Leu
85 90 95

Lys Gly Lys Gly Leu Glu Asp Lys Phe Lys Glu Leu Glu Glu Ser Leu
100 105 110

Ala Lys Lys Lys Gly Glu Arg Lys Lys Ala Leu Gln Glu Ala Lys Gln
115 120 125

Lys Phe Glu Glu Tyr Lys Lys Gln Val Asp Thr Ser Thr Gly Lys Thr
130 135 140

Gln Gly Asp Arg Ser Lys Asn Arg Gly Gly Val Gly Val Gln Ala Trp
145 150 155 160

Gln Cys Ala Asn Glu Leu Gly Leu Gly Val Ser Tyr Ser Asn Gly Gly
165 170 175

Ser Asp Asn Ser Asn Thr Asp Glu Leu Ala Asn Lys Val Ile Asp Asp
180 185 190

Ser Leu Lys Lys Ile Glu Glu Glu Leu Lys Gly Ile Glu Glu Asp Lys
195 200 205

Lys Glu
210

<210> 689

<211> 1083

<212> DNA

<213> Homo sapiens

<400> 689

taattgtttg gggttgtggt aaacttaagg cttatggagt ggattatgaa taaaaaatg 60
aaaatattta ttatttgtgc tgtatttgtg ctgataagtt cttgcaagat tgatgcaact 120
ggtaaagatg caactggtaa agatgcaact ggtaaagatg caactggtaa agatgcaact 180
ggtaaaaatg cagaacaaaa tataaaaggg aaagttcaag gattttttaga aaagatttta 240
gatccagtaa aggataaaat tgcttcaaat ggtccaatag cagatgaatt ggcaaaaaaa 300
ttacaagaag aagaaaagggt aaataacggg gaagaagaaa atgataaagc tgtcttttta 360
ggagaagaat caaaagagga tgaagaagaa aatgagcaag ctgttaattt agaagaaaaa 420
aatgcggaag aggataagaa agttgttaat ttagaagaga aagaattaga agttaaaaaa 480
gagactgaag aagatgaaga taaagaagaa atagagaaac aaaaacaaga agtggaaaaa 540
gcacaagaaa gaaaacaacg acaagaagaa aagaaacgaa aaaaacaaga acagcaagaa 600
gaaaagaaac gaaaacgaca agaacaaaga aaagaaagga gagctaaaaa caaaatttaa 660
aaacttgctg ataaaataga tgagataagt tggaatattg atggtataga aagtcacaaa 720
agtgtaaaac cgaaagcagt tatagataaaa attacggggc ctgtatatga ttattttacc 780
gatgacaaca aaaaagctat atataaaaca tggggagatt tagaagatga agaaggcgaa 840
ggattgggaa aattattgaa agaattgagt gatactagag atgagttaag aaccaatta 900
aataaagata ataaaaaata ttatgcccat gaaaatgagc ctctctctaaa agaaaatgta 960
gatgtcagcg aaattaaaga agatttagaa aaagtaaaat caggattaga aaagggttaa 1020
gaatatctta aagacaattc taaatttgaa gaaattaaag gatacatcag ttacagtcag 1080
taa 1083

<210> 690
 <211> 979
 <212> DNA
 <213> Homo sapiens

<400> 690
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 aactggtaaa gatgcaactg gtaaaaatgc agaacaaaat ataaaaggga aagttcaagg 120
 attttttagaa aagattttag atccagtaaa ggataaaaatt gcttcaaagtg gtccaatagc 180
 agatgaattg gcaaaaaaat tacaagaaga agaaaaggta aataacgggg aagaagaaaa 240
 tgataaagct gtcttttttag gagaagaatc aaaagaggat gaagaagaaa atgagcaagc 300
 tgtaatttta gaagaaaaaa atgcggaaga ggataagaaa gttgttaatt tagaagagaa 360
 agaattagaa gttaaaaaag agactgaaga agatgaagat aaagaagaaa tagagaaaca 420
 aaaacaagaa gtggaaaaag cacaagaaaag aaaacaacga caagaagaaa agaaacgaaa 480
 aaaacaagaa cagcaagaag aaaagaaaacg aaaacgacaa gaacaaagaa aagaaaggag 540
 agctaaaaac aaaatttaaaa aacttgcgga taaaatagat gagataagtt ggaatattga 600
 tggtagtagaa agtcaaacaa gtgtaaaacc gaaagcagtt atagataaaa ttacggggcc 660
 tgtatatgat tattttaccg atgacaacaa aaaagctata tataaaacat ggggagattt 720
 agaagatgaa gaaggcgaag gattgggaaa attattgaaa gaattgagtg atactagaga 780
 tgagttaaga accaaattaa ataaagataa taaaaaatat tatgcccatg aaaatgagcc 840
 tcctctaaaa gaaaatgtag atgtcagcga aattaaagaa gatttagaaa aagtaaaatc 900
 aggattagaa aagggttaaag aatatcttaa agacaattct aaatttgaag aaattaaagg 960
 atacatcagt tacagtcag 979

<210> 691
 <211> 359
 <212> PRT
 <213> Homo sapiens

<400> 691
 Leu Phe Gly Val Val Val Asn Leu Arg Leu Met Glu Trp Ile Met Asn
 1 5 10 15
 Lys Lys Met Lys Ile Phe Ile Ile Cys Ala Val Phe Val Leu Ile Ser
 20 25 30
 Ser Cys Lys Ile Asp Ala Thr Gly Lys Asp Ala Thr Gly Lys Asp Ala
 35 40 45
 Thr Gly Lys Asp Ala Thr Gly Lys Asp Ala Thr Gly Lys Asn Ala Glu
 50 55 60
 Gln Asn Ile Lys Gly Lys Val Gln Gly Phe Leu Glu Lys Ile Leu Asp
 65 70 75 80
 Pro Val Lys Asp Lys Ile Ala Ser Asn Gly Pro Ile Ala Asp Glu Leu
 85 90 95
 Ala Lys Lys Leu Gln Glu Glu Glu Lys Val Asn Asn Gly Glu Glu Glu
 100 105 110
 Asn Asp Lys Ala Val Phe Leu Gly Glu Glu Ser Lys Glu Asp Glu Glu
 115 120 125
 Glu Asn Glu Gln Ala Val Asn Leu Glu Glu Lys Asn Ala Glu Glu Asp
 130 135 140
 Lys Lys Val Val Asn Leu Glu Glu Lys Glu Leu Glu Val Lys Lys Glu
 145 150 155 160

Thr Glu Glu Asp Glu Asp Lys Glu Glu Ile Glu Lys Gln Lys Gln Glu
 165 170 175
 Val Glu Lys Ala Gln Glu Arg Lys Gln Arg Gln Glu Glu Lys Lys Arg
 180 185 190
 Lys Lys Gln Glu Gln Gln Glu Glu Lys Lys Arg Lys Arg Gln Glu Gln
 195 200 205
 Arg Lys Glu Arg Arg Ala Lys Asn Lys Ile Lys Lys Leu Ala Asp Lys
 210 215 220
 Ile Asp Glu Ile Ser Trp Asn Ile Asp Gly Ile Glu Ser Gln Thr Ser
 225 230 235 240
 Val Lys Pro Lys Ala Val Ile Asp Lys Ile Thr Gly Pro Val Tyr Asp
 245 250 255
 Tyr Phe Thr Asp Asp Asn Lys Lys Ala Ile Tyr Lys Thr Trp Gly Asp
 260 265 270
 Leu Glu Asp Glu Glu Gly Glu Gly Leu Gly Lys Leu Leu Lys Glu Leu
 275 280 285
 Ser Asp Thr Arg Asp Glu Leu Arg Thr Lys Leu Asn Lys Asp Asn Lys
 290 295 300
 Lys Tyr Tyr Ala His Glu Asn Glu Pro Pro Leu Lys Glu Asn Val Asp
 305 310 315 320
 Val Ser Glu Ile Lys Glu Asp Leu Glu Lys Val Lys Ser Gly Leu Glu
 325 330 335
 Lys Val Lys Glu Tyr Leu Lys Asp Asn Ser Lys Phe Glu Glu Ile Lys
 340 345 350
 Gly Tyr Ile Ser Tyr Ser Gln
 355

<210> 692
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 692
 Cys Lys Ile Asp Ala Thr Gly Lys Asp Ala Thr Gly Lys Asp Ala Thr
 1 5 10 15
 Gly Lys Asp Ala Thr Gly Lys Asp Ala Thr Gly Lys Asn Ala Glu Gln
 20 25 30
 Asn Ile Lys Gly Lys Val Gln Gly Phe Leu Glu Lys Ile Leu Asp Pro
 35 40 45
 Val Lys Asp Lys Ile Ala Ser Asn Gly Pro Ile Ala Asp Glu Leu Ala
 50 55 60
 Lys Lys Leu Gln Glu Glu Glu Lys Val Asn Asn Gly Glu Glu Glu Asn
 65 70 75 80

Asp Lys Ala Val Phe Leu Gly Glu Glu Ser Lys Glu Asp Glu Glu Glu
 85 90 95
 Asn Glu Gln Ala Val Asn Leu Glu Glu Lys Asn Ala Glu Glu Asp Lys
 100 105 110
 Lys Val Val Asn Leu Glu Glu Lys Glu Leu Glu Val Lys Lys Glu Thr
 115 120 125
 Glu Glu Asp Glu Asp Lys Glu Glu Ile Glu Lys Gln Lys Gln Glu Val
 130 135 140
 Glu Lys Ala Gln Glu Arg Lys Gln Arg Gln Glu Glu Lys Lys Arg Lys
 145 150 155 160
 Lys Gln Glu Gln Gln Glu Glu Lys Lys Arg Lys Arg Gln Glu Gln Arg
 165 170 175
 Lys Glu Arg Arg Ala Lys Asn Lys Ile Lys Lys Leu Ala Asp Lys Ile
 180 185 190
 Asp Glu Ile Ser Trp Asn Ile Asp Gly Ile Glu Ser Gln Thr Ser Val
 195 200 205
 Lys Pro Lys Ala Val Ile Asp Lys Ile Thr Gly Pro Val Tyr Asp Tyr
 210 215 220
 Phe Thr Asp Asp Asn Lys Lys Ala Ile Tyr Lys Thr Trp Gly Asp Leu
 225 230 235 240
 Glu Asp Glu Glu Gly Glu Gly Leu Gly Lys Leu Leu Lys Glu Leu Ser
 245 250 255
 Asp Thr Arg Asp Glu Leu Arg Thr Lys Leu Asn Lys Asp Asn Lys Lys
 260 265 270
 Tyr Tyr Ala His Glu Asn Glu Pro Pro Leu Lys Glu Asn Val Asp Val
 275 280 285
 Ser Glu Ile Lys Glu Asp Leu Glu Lys Val Lys Ser Gly Leu Glu Lys
 290 295 300
 Val Lys Glu Tyr Leu Lys Asp Asn Ser Lys Phe Glu Glu Ile Lys Gly
 305 310 315 320
 Tyr Ile Ser Tyr Ser Gln
 325

<210> 693

<211> 381

<212> DNA

<213> Homo sapiens

<400> 693

taggcaaaat ttaaatttat aaaaacttgt aaggatgctt gtatgaaaat attgataaaa 60
 aagttaaaag ttgtattatt tctcaattta attttactta tttcttgtgt taatgaaagt 120
 aatagaaaca aattggtttt taagctaaat attggaagtg agcctgctac tttagatgct 180
 caattaataa acgatacggg tggatcaggg attgtaagcc aaatgtttct tggcatttta 240
 gatggagatc ccaggactgg aggatacaga ccgggacttg ctaaaagttg ggatatttct 300
 gatgacggag tagtttatac gtttcattta agagataatc ttgtttggag tgatggagtt 360

tccattactg ccgaagaata a

381

<210> 694

<211> 274

<212> DNA

<213> Homo sapiens

<400> 694

ttgtgttaat gaaagtaata gaaacaaatt ggtttttaag ctaaattattg gaagtgaagcc 60
tgctacttta gatgctcaat taataaacga tacggttgga tcagggattg taagccaaat 120
gtttcttggc attttagatg gagatcccag gactggagga tacagaccgg gacttgctaa 180
aagttgggat atttctgatg acggagtagt ttatacgttt catttaagag ataatcttgt 240
ttggagtgat ggagtttcca ttactgccga agaa 274

<210> 695

<211> 125

<212> PRT

<213> Homo sapiens

<400> 695

Ala Lys Phe Lys Phe Ile Lys Thr Cys Lys Asp Ala Cys Met Lys Ile
1 5 10 15

Leu Ile Lys Lys Leu Lys Val Val Leu Phe Leu Asn Leu Ile Leu Leu
20 25 30

Ile Ser Cys Val Asn Glu Ser Asn Arg Asn Lys Leu Val Phe Lys Leu
35 40 45

Asn Ile Gly Ser Glu Pro Ala Thr Leu Asp Ala Gln Leu Ile Asn Asp
50 55 60

Thr Val Gly Ser Gly Ile Val Ser Gln Met Phe Leu Gly Ile Leu Asp
65 70 75 80

Gly Asp Pro Arg Thr Gly Gly Tyr Arg Pro Gly Leu Ala Lys Ser Trp
85 90 95

Asp Ile Ser Asp Asp Gly Val Val Tyr Thr Phe His Leu Arg Asp Asn
100 105 110

Leu Val Trp Ser Asp Gly Val Ser Ile Thr Ala Glu Glu
115 120 125

<210> 696

<211> 91

<212> PRT

<213> Homo sapiens

<400> 696

Cys Val Asn Glu Ser Asn Arg Asn Lys Leu Val Phe Lys Leu Asn Ile
1 5 10 15

Gly Ser Glu Pro Ala Thr Leu Asp Ala Gln Leu Ile Asn Asp Thr Val
20 25 30

Gly Ser Gly Ile Val Ser Gln Met Phe Leu Gly Ile Leu Asp Gly Asp
35 40 45

Pro Arg Thr Gly Gly Tyr Arg Pro Gly Leu Ala Lys Ser Trp Asp Ile

50

55

60

Ser Asp Asp Gly Val Val Tyr Thr Phe His Leu Arg Asp Asn Leu Val
 65 70 75 80

Trp Ser Asp Gly Val Ser Ile Thr Ala Glu Glu
 85 90

<210> 697

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 697

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ataattattg	cactaaaatt	aaatattat	agttatatag	aatcacttaa	ggaacaaaaa	120
atgaaatacc	ttaaaaacat	ttccttattt	ttgttaattt	taggttgcaa	atccatccca	180
aatggtaatt	tcaatctaca	cgatacaaac	cataaattag	gaaaactaaa	atttcaagaa	240
gactcgataa	taagcagaaa	ttatgataat	aaaatatcca	ttgtgggagt	atacaaccct	300
ttaacagaaa	aagaaaattt	taaagtcaat	attttcatca	aaaaaaaagg	attacaaata	360
gatcctgaaa	atattttgat	aaatgaagaa	aaaattaatt	attcaaaata	taaagcagaa	420
ctcaaagtaa	aatctagctt	taataaaaagc	attatcagta	tttactaac	taattcaaga	480
gatctattaa	cctacattta	cgataaaaagc	acagggaaat	acattaacat	tgactttaag	540
gacaattgga	acgtatcgca	cagtataaaa	tttaataagg	agtatatatt	agcatatata	600
acagattttg	ataaagaaat	taaaatatct	aaaaatattt	tgcaaaaacg	tattgataat	660
agaaaaattg	aaattgaaaa	aacagagctt	aaaacagaat	ataatgaaat	agaggattat	720
tacatctaca	gtatgaaaat	tccaaaaatta	tttgaaaaat	cagacgctcc	ctctgaaact	780
tacgaaacat	ttgttatagc	aaattattac	ccctgtgaaa	atttaaataat	actgtttttg	840
aattttaagct	tatactctga	taaattacgc	tttctaaact	ctattttatga	tgagaatgat	900
agaaaattaa	aatggagcc	tctgtgaga	gccttaaaga	attcaaaaac	aataaaagaa	960
acattaaata	tagtattaag	tcttcaaaaa	ataatagagc	tagcaaaaaa	cattgaaaaa	1020
gatattactc	taaaattaaa	atcttacgga	gaaaagggag	aattcacatt	tgaaatatat	1080
aaaccacttc	ttttaaaatt	cttaaaaagaa	gtagatcatt	gcataaaaaa	tttgcaatca	1140
agtaggcata	aatttttaa					1158

<210> 698

<211> 991

<212> DNA

<213> Homo sapiens

<400> 698

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actaaaattt	caagaagact	cgataataag	cagaaattat	gataataaaa	tatccattgt	120
gggagtatac	aaccctttta	cagaaaaaga	aaatttttaa	gtcaatattt	tcatcaaaaa	180
aaaaggatta	caaataagatc	ctgaaaatat	tttgataaat	gaagaaaaaa	tttaattattc	240
aaaatataaa	gcagaactca	aagtaaaatc	tagctttta	aaaagcatta	tcagtatttc	300
actaactaat	tcaagagatc	tattaaccta	cattttacgat	aaaagcacag	ggaaatacat	360
taacattgac	tttaaggaca	attggaacgt	atcgacacag	ataaaattta	ataaggagta	420
tatttttagca	tatataacag	attttgataa	agaaattaaa	atatctaaaa	atattttgca	480
aaaacgtatt	gataatagaa	aaattgaaat	tgaaaaaaca	gagcttaaaa	cagaatataa	540
tgaaatagag	gattattaca	tctacagtat	gaaaattcca	aaattatttg	aaaaatcaga	600
cgctccctct	gaaacttacg	aaacatttgt	tatagcaaat	tattaccctt	gtgaaaattt	660
aaatatactg	tttttgaaat	taagcttata	ctctgataaa	ttacgctttc	taaactctat	720
ttatgatgag	aatgatagaa	aattaaaaat	ggagcctcct	gtgagagcct	taaagaattc	780
aaaaacaata	aaagaaacat	taaatatagt	attaagtcct	caaaaaataa	tagagctagc	840
aaaaaacatt	gaaaaagata	ttactctaaa	attaaaatct	tacggagaaa	agggagaaat	900
cacatttgaa	atatataaac	cacttctttt	aaaattctta	aaagaagtag	atcattgcat	960
aaaaaatttg	caatcaagta	ggcataaatt	t			991

<210> 699

<211> 384
 <212> PRT
 <213> Homo sapiens

<400> 699

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Arg Lys Ala Cys Ile Lys Ser Ile Thr Asn Ser Leu Ile Ile Lys Ile
 1              5              10              15

Lys Lys Asn Ile Ile Ile Ala Leu Lys Leu Asn Leu Tyr Ser Tyr Ile
      20              25              30

Glu Ser Leu Lys Glu Gln Lys Met Lys Tyr Leu Lys Asn Ile Ser Leu
      35              40              45

Phe Leu Leu Ile Leu Gly Cys Lys Ser Ile Pro Asn Gly Asn Phe Asn
      50              55              60

Leu His Asp Thr Asn His Lys Leu Gly Lys Leu Lys Phe Gln Glu Asp
      65              70              75              80

Ser Ile Ile Ser Arg Asn Tyr Asp Asn Lys Ile Ser Ile Val Gly Val
      85              90              95

Tyr Asn Pro Leu Thr Glu Lys Glu Asn Phe Lys Val Asn Ile Phe Ile
      100             105             110

Lys Lys Lys Gly Leu Gln Ile Asp Pro Glu Asn Ile Leu Ile Asn Glu
      115             120             125

Glu Lys Ile Asn Tyr Ser Lys Tyr Lys Ala Glu Leu Lys Val Lys Ser
      130             135             140

Ser Phe Asn Lys Ser Ile Ile Ser Ile Ser Leu Thr Asn Ser Arg Asp
      145             150             155             160

Leu Leu Thr Tyr Ile Tyr Asp Lys Ser Thr Gly Lys Tyr Ile Asn Ile
      165             170             175

Asp Phe Lys Asp Asn Trp Asn Val Ser His Ser Ile Lys Phe Asn Lys
      180             185             190

Glu Tyr Ile Leu Ala Tyr Ile Thr Asp Phe Asp Lys Glu Ile Lys Ile
      195             200             205

Ser Lys Asn Ile Leu Gln Lys Arg Ile Asp Asn Arg Lys Ile Glu Ile
      210             215             220

Glu Lys Thr Glu Leu Lys Thr Glu Tyr Asn Glu Ile Glu Asp Tyr Tyr
      225             230             235             240

Ile Tyr Ser Met Lys Ile Pro Lys Leu Phe Glu Lys Ser Asp Ala Pro
      245             250             255

Ser Glu Thr Tyr Glu Thr Phe Val Ile Ala Asn Tyr Tyr Pro Cys Glu
      260             265             270

Asn Leu Asn Ile Leu Phe Leu Asn Leu Ser Leu Tyr Ser Asp Lys Leu
      275             280             285

Arg Phe Leu Asn Ser Ile Tyr Asp Glu Asn Asp Arg Lys Leu Lys Met

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290 295 300
 Glu Pro Pro Val Arg Ala Leu Lys Asn Ser Lys Thr Ile Lys Glu Thr
 305 310 315 320
 Leu Asn Ile Val Leu Ser Pro Gln Lys Ile Ile Glu Leu Ala Lys Asn
 325 330 335
 Ile Glu Lys Asp Ile Thr Leu Lys Leu Lys Ser Tyr Gly Glu Lys Gly
 340 345 350
 Glu Phe Thr Phe Glu Ile Tyr Lys Pro Leu Leu Leu Lys Phe Leu Lys
 355 360 365
 Glu Val Asp His Cys Ile Lys Asn Leu Gln Ser Ser Arg His Lys Phe
 370 375 380

 <210> 700
 <211> 330
 <212> PRT
 <213> Homo sapiens

 <400> 700
 Cys Lys Ser Ile Pro Asn Gly Asn Phe Asn Leu His Asp Thr Asn His
 1 5 10 15
 Lys Leu Gly Lys Leu Lys Phe Gln Glu Asp Ser Ile Ile Ser Arg Asn
 20 25 30
 Tyr Asp Asn Lys Ile Ser Ile Val Gly Val Tyr Asn Pro Leu Thr Glu
 35 40 45
 Lys Glu Asn Phe Lys Val Asn Ile Phe Ile Lys Lys Lys Gly Leu Gln
 50 55 60
 Ile Asp Pro Glu Asn Ile Leu Ile Asn Glu Glu Lys Ile Asn Tyr Ser
 65 70 75 80
 Lys Tyr Lys Ala Glu Leu Lys Val Lys Ser Ser Phe Asn Lys Ser Ile
 85 90 95
 Ile Ser Ile Ser Leu Thr Asn Ser Arg Asp Leu Leu Thr Tyr Ile Tyr
 100 105 110
 Asp Lys Ser Thr Gly Lys Tyr Ile Asn Ile Asp Phe Lys Asp Asn Trp
 115 120 125
 Asn Val Ser His Ser Ile Lys Phe Asn Lys Glu Tyr Ile Leu Ala Tyr
 130 135 140
 Ile Thr Asp Phe Asp Lys Glu Ile Lys Ile Ser Lys Asn Ile Leu Gln
 145 150 155 160
 Lys Arg Ile Asp Asn Arg Lys Ile Glu Ile Glu Lys Thr Glu Leu Lys
 165 170 175
 Thr Glu Tyr Asn Glu Ile Glu Asp Tyr Tyr Ile Tyr Ser Met Lys Ile
 180 185 190
 Pro Lys Leu Phe Glu Lys Ser Asp Ala Pro Ser Glu Thr Tyr Glu Thr

195 200 205

Phe Val Ile Ala Asn Tyr Tyr Pro Cys Glu Asn Leu Asn Ile Leu Phe
210 215 220

Leu Asn Leu Ser Leu Tyr Ser Asp Lys Leu Arg Phe Leu Asn Ser Ile
225 230 235 240

Tyr Asp Glu Asn Asp Arg Lys Leu Lys Met Glu Pro Pro Val Arg Ala
245 250 255

Leu Lys Asn Ser Lys Thr Ile Lys Glu Thr Leu Asn Ile Val Leu Ser
260 265 270

Pro Gln Lys Ile Ile Glu Leu Ala Lys Asn Ile Glu Lys Asp Ile Thr
275 280 285

Leu Lys Leu Lys Ser Tyr Gly Glu Lys Gly Glu Phe Thr Phe Glu Ile
290 295 300

Tyr Lys Pro Leu Leu Leu Lys Phe Leu Lys Glu Val Asp His Cys Ile
305 310 315 320

Lys Asn Leu Gln Ser Ser Arg His Lys Phe
325 330

<210> 701
<211> 555
<212> DNA
<213> Homo sapiens

<400> 701
taaatagaaga agtttttaaat atccgtttat tttttattgt tttatgggtg ttcaactata 60
tcttttgtaa aaataaccaga aaaagataaa ataaatttaa ctgttttatc atctttaatg 120
aattatcctg atttgaagat ttcaaatttt aaaataaaaag actacgaaca ttgcattat 180
tcatctgatt ttgaaagctt gagtgatact aaaaatagtg cttatatatta cgttgatgaa 240
tctagtttca ataataatat taattttatt aaagatcttt ttatttataa taagaaatta 300
tatagaatac ttattgctta tagcttgacc caagggtgcat cttttaaggc agaagtttta 360
tcttatcttg aaaaacaaaa aattatgaaa aatttttcat tgaaaaataa ttttccaact 420
gctaaaaaat ttatggataa taagtattgg attgtaattg caaaaaacca tttagattct 480
cttgtaaga gtaaaaatta tttagtcttg gcgaatgtaa agatggaata tataactcaa 540
aagtttttaa cttga 555

<210> 702
<211> 451
<212> DNA
<213> Homo sapiens

<400> 702
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atcatcttta atgaattatc ctgatttgaa gatttcaa atttaaaataa aagactacga 120
acatttgc atttcatctg attttgaaag cttgagtgat actaaaaata gtgcttatat 180
ttacgttgat gaatctagtt tcaataataa tattaatttt attaaagatc tttttattta 240
taataagaaa ttatatagaa tacttattgc ttatagcttg acccaagggtg catcttttaa 300
ggcagaagtt ttatcttattc ttgaaaaaca aaaaattatg aaaaattttt cattgaaaaat 360
aaattttcca actgctaaaa aatttatgga taataagtat tggattgtaa ttgcaaaaaa 420
ccatttagat tctcttgtaa agagtaaaaa t 451

<210> 703
<211> 183

<212> PRT

<213> Homo sapiens

<400> 703

Met Lys Lys Phe Leu Ile Ser Val Tyr Phe Leu Leu Phe Tyr Gly Cys
1 5 10 15
Ser Thr Ile Ser Leu Val Lys Ile Pro Glu Lys Asp Lys Ile Asn Leu
20 25 30
Thr Val Leu Ser Ser Leu Met Asn Tyr Pro Asp Leu Lys Ile Ser Asn
35 40 45
Phe Lys Ile Lys Asp Tyr Glu His Leu His Tyr Ser Ser Asp Phe Glu
50 55 60
Ser Leu Ser Asp Thr Lys Asn Ser Ala Tyr Ile Tyr Val Asp Glu Ser
65 70 75 80
Ser Phe Asn Asn Asn Ile Asn Phe Ile Lys Asp Leu Phe Ile Tyr Asn
85 90 95
Lys Lys Leu Tyr Arg Ile Leu Ile Ala Tyr Ser Leu Thr Gln Gly Ala
100 105 110
Ser Phe Lys Ala Glu Val Leu Ser Tyr Leu Glu Lys Gln Lys Ile Met
115 120 125
Lys Asn Phe Ser Leu Lys Ile Asn Phe Pro Thr Ala Lys Lys Phe Met
130 135 140
Asp Asn Lys Tyr Trp Ile Val Ile Ala Lys Asn His Leu Asp Ser Leu
145 150 155 160
Val Lys Ser Lys Asn Tyr Leu Val Leu Ala Asn Val Lys Met Glu Tyr
165 170 175
Ile Leu Lys Lys Phe Leu Thr
180

<210> 704

<211> 150

<212> PRT

<213> Homo sapiens

<400> 704

Cys Ser Thr Ile Ser Leu Val Lys Ile Pro Glu Lys Asp Lys Ile Asn
1 5 10 15
Leu Thr Val Leu Ser Ser Leu Met Asn Tyr Pro Asp Leu Lys Ile Ser
20 25 30
Asn Phe Lys Ile Lys Asp Tyr Glu His Leu His Tyr Ser Ser Asp Phe
35 40 45
Glu Ser Leu Ser Asp Thr Lys Asn Ser Ala Tyr Ile Tyr Val Asp Glu
50 55 60
Ser Ser Phe Asn Asn Asn Ile Asn Phe Ile Lys Asp Leu Phe Ile Tyr
65 70 75 80

Asn Lys Lys Leu Tyr Arg Ile Leu Ile Ala Tyr Ser Leu Thr Gln Gly
85 90 95

Ala Ser Phe Lys Ala Glu Val Leu Ser Tyr Leu Glu Lys Gln Lys Ile
100 105 110

Met Lys Asn Phe Ser Leu Lys Ile Asn Phe Pro Thr Ala Lys Lys Phe
115 120 125

Met Asp Asn Lys Tyr Trp Ile Val Ile Ala Lys Asn His Leu Asp Ser
130 135 140

Leu Val Lys Ser Lys Asn
145 150

<210> 705

<211> 450

<212> DNA

<213> Homo sapiens

<400> 705

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ataatgaaaa atttaaagac aaaaattaat ttttttaggga ttttttggt actgttacta 120
tttcttttctt gcgaatcaat accatcactt ccccaaaaac caaccctaac aaacaaagaa 180
gatattgaaa atttaagtct cgatgaagca gaacttttta gatactcaac cgcactaaat 240
gtttggcttt tgactgtaaa atcttatgtg atcaaatact atcctaataa caaatttcct 300
gtgtttgaaa attttgatcc cgtgtttggc gatgaaaatg gaactaaaga aacaaatata 360
ctaaaaaatc gaattaccta ctacaatcga tacatagaaa aaaccgaacc gattgtattt 420
gggtgttaca aaaaatacag cagaagataa 450

<210> 706

<211> 319

<212> DNA

<213> Homo sapiens

<400> 706

ttgcgaatca ataccatcac ttccccaaaa accaacccta acaaacaaag aagatattga 60
aaatttaatg ctcgatgaag cagaactttt tagatactca accgcactaa atgtttggct 120
tttgactgta aaatcttatg tgatcaaata ctatcctaata gacaaatttc ctgtgtttga 180
aaattttgat cccgtgtttg gcgatgaaaa tggaactaaa gaaacaaata tactaaaaaa 240
tcgaattacc tactacaatc gatacataga aaaaaccgaa ccgattgtat ttgggtgtta 300
caaaaaatac agcagaaga 319

<210> 707

<211> 148

<212> PRT

<213> Homo sapiens

<400> 707

Arg Arg Ser His Lys Gln Asn Val Lys Arg Phe Thr Lys Ser Ser Ser
1 5 10 15

Arg Gly Gln Ile Met Lys Asn Leu Lys Thr Lys Ile Asn Phe Leu Gly
20 25 30

Ile Phe Trp Leu Leu Leu Phe Leu Ser Cys Glu Ser Ile Pro Ser
35 40 45

Leu Pro Gln Lys Pro Thr Leu Thr Asn Lys Glu Asp Ile Glu Asn Leu

[illegible]

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453

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<212> DNA
<213> Homo sapiens

<400> 710
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aaagctatct gatgatcaaa aaacacaact tgactgggta aaaaccgctt taactgggtgt 180
tggaataatt gataaattct tagaaaatga tgaaggcaaa attaaatcag cacttgaaca 240
tataaagact gaacttgata aatgtaatgg aaatgatgaa ggaaaaaaca ccttcaaaac 300
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<210> 711
<211> 149
<212> PRT
<213> Homo sapiens

<400> 711
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Phe Cys Leu Phe Leu Leu Met Leu Asn Gly Cys Asn Ser Asn Asp Thr
20 25 30
Asn Thr Lys Gln Thr Lys Ser Arg Gln Lys Arg Asp Leu Thr Gln Lys
35 40 45
Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys Ser Lys Glu Asp Leu Leu
50 55 60
Arg Glu Lys Leu Ser Asp Asp Gln Lys Thr Gln Leu Asp Trp Leu Lys
65 70 75 80
Thr Ala Leu Thr Gly Val Gly Lys Phe Asp Lys Phe Leu Glu Asn Asp
85 90 95
Glu Gly Lys Ile Lys Ser Ala Leu Glu His Ile Lys Thr Glu Leu Asp
100 105 110
Lys Cys Asn Gly Asn Asp Glu Gly Lys Asn Thr Phe Lys Thr Thr Val
115 120 125
Gln Gly Phe Phe Ser Gly Gly Asn Ile Asp Asn Phe Ala Asp Gln Ala
130 135 140
Thr Ala Thr Cys Asn
145

<210> 712
<211> 123
<212> PRT
<213> Homo sapiens

<400> 712
Cys Asn Ser Asn Asp Thr Asn Thr Lys Gln Thr Lys Ser Arg Gln Lys
1 5 10 15

Arg Asp Leu Thr Gln Lys Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys
 20 25 30
 Ser Lys Glu Asp Leu Leu Arg Glu Lys Leu Ser Asp Asp Gln Lys Thr
 35 40 45
 Gln Leu Asp Trp Leu Lys Thr Ala Leu Thr Gly Val Gly Lys Phe Asp
 50 55 60
 Lys Phe Leu Glu Asn Asp Glu Gly Lys Ile Lys Ser Ala Leu Glu His
 65 70 75 80
 Ile Lys Thr Glu Leu Asp Lys Cys Asn Gly Asn Asp Glu Gly Lys Asn
 85 90 95
 Thr Phe Lys Thr Thr Val Gln Gly Phe Phe Ser Gly Gly Asn Ile Asp
 100 105 110
 Asn Phe Ala Asp Gln Ala Thr Ala Thr Cys Asn
 115 120

<210> 713
 <211> 768
 <212> DNA
 <213> Homo sapiens

<400> 713
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 atttcaaadc aagatgcaga ttctgataaa ataataaaaa ataaattact tgatgattta 180
 ataaatttaa tagaaaaagc gaatgcagat agagaaaaat atgtaaaaaa aatggaagaa 240
 gaaccttcgg atcaatatgg aatgttggct gtttttggag gtatgtattg ggcagaatca 300
 ccacgggaat taatatctga tacaggtagt gagagatcta ttaggtatag aaggcgtgtt 360
 tatagtattt tattaaatgc tattgaaact aatgaattaa agaaattttc agaaattaga 420
 atactgtcaa taaaagtact agaaatattt agcctattta atctatttgg aagtactctt 480
 gatgatgtgg ttgttcactt atattccaaa aaagatactc taggtaaact agatatttca 540
 aatttaaaaa gacttaaaaa tttgtttgaa aaattattat ctataaaaaac aatcgtttca 600
 aagatgtcaa aacgtctttt attggattat caaaataatg aaaattttat aaaaacagat 660
 aacgccaagc ttggatctta tgtggttgca ctttccaatc aaattcaaga aaaatataat 720
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<210> 714
 <211> 670
 <212> DNA
 <213> Homo sapiens

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 aatagaaaaa gcgaatgcag atagagaaaa atatgtaaaa aaaatggaag aagaaccttc 180
 ggatcaatat ggaatgttgg ctgtttttgg aggtatgtat tgggcagaat caccacggga 240
 attaatatct gatacaggta gtgagagatc tattaggtat agaaggcgtg tttatagtat 300
 tttattaaat gctattgaaa ctaatgaatt aaagaaattt tcagaaatta gaatactgtc 360
 aataaaaagta ctagaaatat ttagcctatt taatctattt ggaagtactc ttgatgatgt 420
 ggttgttcac ttatattcca aaaaagatac tctaggtaaa ctagatattt caaattttaa 480
 aagacttaaa aatttgtttg aaaaattatt atctataaaa acaatcgttt caaagatgtc 540
 aaaacgtctt ttattggatt atcaaaataa tgaaaatttt ataaaaacag ataacgcaa 600
 gcttggatct tatgtggttg cactttccaa tcaaattcaa gaaaaatata atgaagcaga 660
 aaggctgaaa

<210> 715
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 715
 Val Arg Arg Ile Phe Met Lys Tyr Asn Thr Ile Ile Ser Ile Phe Val
 1 5 10 15
 Cys Leu Phe Leu Thr Ala Cys Asn Pro Asp Phe Asn Thr Asn Lys Lys
 20 25 30
 Arg Thr Leu Ser Lys Gly Ile Ile Ser Asn Gln Asp Ala Asp Ser Asp
 35 40 45
 Lys Ile Ile Lys Asn Lys Leu Leu Asp Asp Leu Ile Asn Leu Ile Glu
 50 55 60
 Lys Ala Asn Ala Asp Arg Glu Lys Tyr Val Lys Lys Met Glu Glu Glu
 65 70 75 80
 Pro Ser Asp Gln Tyr Gly Met Leu Ala Val Phe Gly Gly Met Tyr Trp
 85 90 95
 Ala Glu Ser Pro Arg Glu Leu Ile Ser Asp Thr Gly Ser Glu Arg Ser
 100 105 110
 Ile Arg Tyr Arg Arg Arg Val Tyr Ser Ile Leu Leu Asn Ala Ile Glu
 115 120 125
 Thr Asn Glu Leu Lys Lys Phe Ser Glu Ile Arg Ile Leu Ser Ile Lys
 130 135 140
 Val Leu Glu Ile Phe Ser Leu Phe Asn Leu Phe Gly Ser Thr Leu Asp
 145 150 155 160
 Asp Val Val Val His Leu Tyr Ser Lys Lys Asp Thr Leu Gly Lys Leu
 165 170 175
 Asp Ile Ser Asn Leu Lys Arg Leu Lys Asn Leu Phe Glu Lys Leu Leu
 180 185 190
 Ser Ile Lys Thr Ile Val Ser Lys Met Ser Lys Arg Leu Leu Leu Asp
 195 200 205
 Tyr Gln Asn Asn Glu Asn Phe Ile Lys Thr Asp Asn Ala Lys Leu Gly
 210 215 220
 Ser Tyr Val Val Ala Leu Ser Asn Gln Ile Gln Glu Lys Tyr Asn Glu
 225 230 235 240
 Ala Glu Arg Leu Lys Ser Glu Ile Ile Leu Ile Tyr Thr Leu
 245 250

<210> 716
 <211> 223
 <212> PRT
 <213> Homo sapiens

<400> 716

Cys Asn Pro Asp Phe Asn Thr Asn Lys Lys Arg Thr Leu Ser Lys Gly
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Ile Ile Ser Asn Gln Asp Ala Asp Ser Asp Lys Ile Ile Lys Asn Lys
20 25 30

Leu Leu Asp Asp Leu Ile Asn Leu Ile Glu Lys Ala Asn Ala Asp Arg
35 40 45

Glu Lys Tyr Val Lys Lys Met Glu Glu Glu Pro Ser Asp Gln Tyr Gly
50 55 60

Met Leu Ala Val Phe Gly Gly Met Tyr Trp Ala Glu Ser Pro Arg Glu
65 70 75 80

Leu Ile Ser Asp Thr Gly Ser Glu Arg Ser Ile Arg Tyr Arg Arg Arg
85 90 95

Val Tyr Ser Ile Leu Leu Asn Ala Ile Glu Thr Asn Glu Leu Lys Lys
100 105 110

Phe Ser Glu Ile Arg Ile Leu Ser Ile Lys Val Leu Glu Ile Phe Ser
115 120 125

Leu Phe Asn Leu Phe Gly Ser Thr Leu Asp Asp Val Val Val His Leu
130 135 140

Tyr Ser Lys Lys Asp Thr Leu Gly Lys Leu Asp Ile Ser Asn Leu Lys
145 150 155 160

Arg Leu Lys Asn Leu Phe Glu Lys Leu Leu Ser Ile Lys Thr Ile Val
165 170 175

Ser Lys Met Ser Lys Arg Leu Leu Leu Asp Tyr Gln Asn Asn Glu Asn
180 185 190

Phe Ile Lys Thr Asp Asn Ala Lys Leu Gly Ser Tyr Val Val Ala Leu
195 200 205

Ser Asn Gln Ile Gln Glu Lys Tyr Asn Glu Ala Glu Arg Leu Lys
210 215 220

<210> 717

<211> 951

<212> DNA

<213> Homo sapiens

<400> 717

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gctattaata atttatatgg aaataaaaaa gaaaaaaaag attttattaa aaattcggaa 240
aaattgaaag acaagggttt agacgtgacc accctcccct tagaacctgt agtggcgccc 300
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tcaattgagc ataatcaaaa aaaagagata aaagaagagg attttttccc ttctactgag 420
gaagaaaagc aagcggataa agcaattaaa gatatagaga atcttattgg agaactctgga 480
tttcccagat taattgagaa tgtgtgctca cttaaactatg aatatacttt aataagaagt 540
gatttttatg atgtgataac taagattcag aataaaaaaa taccactaat gaaaaattct 600
cataataata gaaataaaat aagggaacta gtacaattgc aaaataattt aaagatagga 660

gacgaacttg ataaaaattat gggttgcatt gatactgcag aacaagagat aagatctgcc 720
gctttctttt ttgatgaagc taaggaaagc ttaaaagaag gtattattaa aagattggaa 780
aaaagtaaaa atagggcagc atcacaatta tctaaaaagg ctttaaatag agcagaggat 840
gctttaagggt gcttagaaaa ttattcttct aaaaaagggt aggcaatagg aagaagaagc 900
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<210> 718

<211> 859

<212> DNA

<213> Homo sapiens

<400> 718

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agaaaaaaaa gattttatta aaaattcggg aaaattgaaa gacaagggtt tagacgtgac 180
caccctcccc ttagaacctg tagtggcgcc ctccgtagaa tctgcggtgt ctttaggaga 240
atctaataat aggattggta taccaaccat ttcaattgag cataatcaaa aaaagagat 300
aaaagaagag gattttttcc cttctactga ggaagaaaag caagcggata aagcaattaa 360
agatatagag aatcttattg gagaatctgg atttcccgag ttaattgaga atgtgtgctc 420
acttaaacat gaatatactt taataagaag tgatttttat gatgtgataa ctaagattca 480
gaataaaaaa atatcactaa tgaaaaattc tcataataat agaaataaaa taagggaact 540
agtacaattg caaaataatt taaagatagg agacgaactt gataaaatta tgggttgcat 600
tgatactgca gaacaagaga taagatctgc cgctttcttt tttgatgaag ctaaggaaaag 660
cttaaaagaa ggtattatta aaagattgga aaaaagtaaa aatagggcag catcacaatt 720
atctaaaaag gctttaaata gagcagagga tgctttaagg tgcttagaaa attattcttc 780
taaaaaagggt gaggcaatag gaagaagaag ctttataaaa gaagttgttg aacaggcaaa 840
aatgcttta agtaagtct 859

<210> 719

<211> 315

<212> PRT

<213> Homo sapiens

<400> 719

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Met Phe Leu Tyr Thr Leu Leu Thr Ile Gly Leu Met Ser Cys Asn Leu
20 25 30

Asn Ser Lys Leu Ser Gly Asn Lys Glu Glu Gln Lys Asn Asn Asn Asp
35 40 45

Ile Lys Glu Ala Leu Asn Gly Val Gln Glu Asn Ala Ile Asn Asn Leu
50 55 60

Tyr Gly Asn Lys Lys Glu Lys Lys Asp Phe Ile Lys Asn Ser Glu Lys
65 70 75 80

Leu Lys Asp Lys Gly Leu Asp Val Thr Thr Leu Pro Leu Glu Pro Val
85 90 95

Val Ala Pro Ser Val Glu Ser Ala Val Ser Leu Gly Glu Ser Asn Asn
100 105 110

Arg Ile Gly Ile Pro Thr Ile Ser Ile Glu His Asn Gln Lys Lys Glu
115 120 125

Ile Lys Glu Glu Asp Phe Phe Pro Ser Thr Glu Glu Glu Lys Gln Ala
130 135 140

Asp Lys Ala Ile Lys Asp Ile Glu Asn Leu Ile Gly Glu Ser Gly Phe
 145 150 155 160
 Pro Glu Leu Ile Glu Asn Val Cys Ser Leu Lys His Glu Tyr Thr Leu
 165 170 175
 Ile Arg Ser Asp Phe Tyr Asp Val Ile Thr Lys Ile Gln Asn Lys Lys
 180 185 190
 Ile Ser Leu Met Lys Asn Ser His Asn Asn Arg Asn Lys Ile Arg Glu
 195 200 205
 Leu Val Gln Leu Gln Asn Asn Leu Lys Ile Gly Asp Glu Leu Asp Lys
 210 215 220
 Ile Met Gly Cys Ile Asp Thr Ala Glu Gln Glu Ile Arg Ser Ala Ala
 225 230 235 240
 Phe Phe Phe Asp Glu Ala Lys Glu Ser Leu Lys Glu Gly Ile Ile Lys
 245 250 255
 Arg Leu Glu Lys Ser Lys Asn Arg Ala Ala Ser Gln Leu Ser Lys Lys
 260 265 270
 Ala Leu Asn Arg Ala Glu Asp Ala Leu Arg Cys Leu Glu Asn Tyr Ser
 275 280 285
 Ser Lys Lys Gly Glu Ala Ile Gly Arg Arg Ser Phe Ile Lys Glu Val
 290 295 300
 Val Glu Gln Ala Lys Asn Ala Leu Ser Lys Ser
 305 310 315
 <210> 720
 <211> 286
 <212> PRT
 <213> Homo sapiens
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 Asn Asn Asp Ile Lys Glu Ala Leu Asn Gly Val Gln Glu Asn Ala Ile
 20 25 30
 Asn Asn Leu Tyr Gly Asn Lys Lys Glu Lys Lys Asp Phe Ile Lys Asn
 35 40 45
 Ser Glu Lys Leu Lys Asp Lys Gly Leu Asp Val Thr Thr Leu Pro Leu
 50 55 60
 Glu Pro Val Val Ala Pro Ser Val Glu Ser Ala Val Ser Leu Gly Glu
 65 70 75 80
 Ser Asn Asn Arg Ile Gly Ile Pro Thr Ile Ser Ile Glu His Asn Gln
 85 90 95
 Lys Lys Glu Ile Lys Glu Glu Asp Phe Phe Pro Ser Thr Glu Glu Glu
 100 105 110

Lys Gln Ala Asp Lys Ala Ile Lys Asp Ile Glu Asn Leu Ile Gly Glu
 115 120 125
 Ser Gly Phe Pro Glu Leu Ile Glu Asn Val Cys Ser Leu Lys His Glu
 130 135 140
 Tyr Thr Leu Ile Arg Ser Asp Phe Tyr Asp Val Ile Thr Lys Ile Gln
 145 150 155 160
 Asn Lys Lys Ile Ser Leu Met Lys Asn Ser His Asn Asn Arg Asn Lys
 165 170 175
 Ile Arg Glu Leu Val Gln Leu Gln Asn Asn Leu Lys Ile Gly Asp Glu
 180 185 190
 Leu Asp Lys Ile Met Gly Cys Ile Asp Thr Ala Glu Gln Glu Ile Arg
 195 200 205
 Ser Ala Ala Phe Phe Phe Asp Glu Ala Lys Glu Ser Leu Lys Glu Gly
 210 215 220
 Ile Ile Lys Arg Leu Glu Lys Ser Lys Asn Arg Ala Ala Ser Gln Leu
 225 230 235 240
 Ser Lys Lys Ala Leu Asn Arg Ala Glu Asp Ala Leu Arg Cys Leu Glu
 245 250 255
 Asn Tyr Ser Ser Lys Lys Gly Glu Ala Ile Gly Arg Arg Ser Phe Ile
 260 265 270
 Lys Glu Val Val Glu Gln Ala Lys Asn Ala Leu Ser Lys Ser
 275 280 285

<210> 721
 <211> 918
 <212> DNA
 <213> Homo sapiens

<400> 721
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 gcgataagtg aattacaatc aagccctatt aaacttggaa aaattaaagt tttacaaaaa 180
 acagaaaaga ttgtaagcac ccaaaatctt caaaacttac aacaaagcca gttcttttaa 240
 aatgaaaaag aaaaaataat taaaaaaatt gcacaagaat ttgatgagaa tgaaaaattg 300
 attaataaaa taggtccaaa tatcgaaatg tttgctcaaa caataaacac ggatattcaa 360
 aaaatcgaac ctaatgatca atttggaata aataaaactt tattcacaga aaaaaagac 420
 aataatattg actttatggt aaaagacaat cgacttagaa gattatttta ctcatcttta 480
 aattatgatg aaaataaaat caaaaaatta gccacaatac tcgcgcaaac atcaagctca 540
 aacgactacc attacacact tattgggtta attttttgga caggatttaa aatccaagaa 600
 gcatttgaaa gcgctgttaa tattttaact aaagacgagc aaaagcgctt aatttttaaat 660
 tttagaacaa aaacagtaaa agagattcag gaaaattttg aaaaactaat gcaagagaga 720
 aattcatgga taaaaatcgt cgataacatt attggcgaat atgacaaaaa tacgggagga 780
 tgcaaaagctg atggaaaaat tctcggagaa gtaataaggg ttggatacga gcatgaactc 840
 gactcaaata aaagtatgca aatttttaaac aatattgaaa caccgctaaa aacctgttgt 900
 gaccacatac actactaa 918

<210> 722
 <211> 828
 <212> DNA

<213> Homo sapiens

<400> 722

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cttcaaaaact tacaacaaag ccagttcttt aaaaatgaaa aagaaaaaat aattaaaaaa 180
attgcacaag aatttgatga gaatgaaaaa ttgattaata aaataggtcc aaatatcgaa 240
atgtttgctc aaacaataaa cacggatatt caaaaaatcg aacctaata tcaatttgga 300
ataaataaaa ctttattcac agaaaaaaaa gacaataata ttgactttat gttaaaagac 360
aatcgactta gaagattatt ttactcatct ttaaattatg atgaaaataa aatcaaaaaa 420
ttagccacaa tactcgcgca aacatcaagc tcaaacgact accattacac acttattggt 480
ttaatttttt ggacaggatt taaaatccaa gaagcatttg aaagcgctgt taatatttta 540
actaaagacg agcaaaagcg cctaattttt aatttttagaa caaaaacagt aaaagagatt 600
caggaaaatt ttgaaaaact aatgcaagag agaaattcat ggataaaaaat cgtcgataac 660
attattggcg aatatgacaa aaatacggga ggatgcaaag ctgatggaaa aattctcgga 720
gaagtaataa gggttggata cgagcatgaa ctcgactcaa ataaaagtat gcaaatttta 780
aacaatattg aaacaccgct aaaaacctgt tgtgaccaca tacactac 828
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<210> 723

<211> 304

<212> PRT

<213> Homo sapiens

<400> 723

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      20             25             30

Ser Lys Ser Asn Asn Thr Glu Ala Ile Ser Glu Leu Gln Ser Ser Pro
      35             40             45

Ile Lys Leu Gly Lys Ile Lys Val Leu Gln Lys Thr Glu Lys Ile Val
      50             55             60

Ser Thr Gln Asn Leu Gln Asn Leu Gln Gln Ser Gln Phe Phe Lys Asn
      65             70             75             80

Glu Lys Glu Lys Ile Ile Lys Lys Ile Ala Gln Glu Phe Asp Glu Asn
      85             90             95

Glu Lys Leu Ile Asn Lys Ile Gly Pro Asn Ile Glu Met Phe Ala Gln
      100            105            110

Thr Ile Asn Thr Asp Ile Gln Lys Ile Glu Pro Asn Asp Gln Phe Gly
      115            120            125

Ile Asn Lys Thr Leu Phe Thr Glu Lys Lys Asp Asn Asn Ile Asp Phe
      130            135            140

Met Leu Lys Asp Asn Arg Leu Arg Arg Leu Phe Tyr Ser Ser Leu Asn
      145            150            155            160

Tyr Asp Glu Asn Lys Ile Lys Lys Leu Ala Thr Ile Leu Ala Gln Thr
      165            170            175

Ser Ser Ser Asn Asp Tyr His Tyr Thr Leu Ile Gly Leu Ile Phe Trp
      180            185            190
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Thr Gly Phe Lys Ile Gln Glu Ala Phe Glu Ser Ala Val Asn Ile Leu
 195 200 205
 Thr Lys Asp Glu Gln Lys Arg Leu Ile Phe Asn Phe Arg Thr Lys Thr
 210 215 220
 Val Lys Glu Ile Gln Glu Asn Phe Glu Lys Leu Met Gln Glu Arg Asn
 225 230 235 240
 Ser Trp Ile Lys Ile Val Asp Asn Ile Ile Gly Glu Tyr Asp Lys Asn
 245 250 255
 Thr Gly Gly Cys Lys Ala Asp Gly Lys Ile Leu Gly Glu Val Ile Arg
 260 265 270
 Val Gly Tyr Glu His Glu Leu Asp Ser Asn Lys Ser Met Gln Ile Leu
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 <211> 276
 <212> PRT
 <213> Homo sapiens
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 Glu Lys Ile Val Ser Thr Gln Asn Leu Gln Asn Leu Gln Gln Ser Gln
 35 40 45
 Phe Phe Lys Asn Glu Lys Glu Lys Ile Ile Lys Lys Ile Ala Gln Glu
 50 55 60
 Phe Asp Glu Asn Glu Lys Leu Ile Asn Lys Ile Gly Pro Asn Ile Glu
 65 70 75 80
 Met Phe Ala Gln Thr Ile Asn Thr Asp Ile Gln Lys Ile Glu Pro Asn
 85 90 95
 Asp Gln Phe Gly Ile Asn Lys Thr Leu Phe Thr Glu Lys Lys Asp Asn
 100 105 110
 Asn Ile Asp Phe Met Leu Lys Asp Asn Arg Leu Arg Arg Leu Phe Tyr
 115 120 125
 Ser Ser Leu Asn Tyr Asp Glu Asn Lys Ile Lys Lys Leu Ala Thr Ile
 130 135 140
 Leu Ala Gln Thr Ser Ser Ser Asn Asp Tyr His Tyr Thr Leu Ile Gly
 145 150 155 160
 Leu Ile Phe Trp Thr Gly Phe Lys Ile Gln Glu Ala Phe Glu Ser Ala
 165 170 175

Val Asn Ile Leu Thr Lys Asp Glu Gln Lys Arg Leu Ile Phe Asn Phe
180 185 190

Arg Thr Lys Thr Val Lys Glu Ile Gln Glu Asn Phe Glu Lys Leu Met
195 200 205

Gln Glu Arg Asn Ser Trp Ile Lys Ile Val Asp Asn Ile Ile Gly Glu
210 215 220

Tyr Asp Lys Asn Thr Gly Gly Cys Lys Ala Asp Gly Lys Ile Leu Gly
225 230 235 240

Glu Val Ile Arg Val Gly Tyr Glu His Glu Leu Asp Ser Asn Lys Ser
245 250 255

Met Gln Ile Leu Asn Asn Ile Glu Thr Pro Leu Lys Thr Cys Cys Asp
260 265 270

His Ile His Tyr
275

<210> 725
<211> 828
<212> DNA
<213> Homo sapiens

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aaacccgccca atccagggga aaacatccaa aatttttaaag ataaatctgg agaccttggc 240
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ctagaagatc gaaaaaatca atacgatata caaatagcca aaattactaa tgaagaatct 360
aacctattag atacttatat tcgggcttat gaactagcta acgaaaatga aaaaatgctt 420
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gaaattcttg aaaaactcat aaataattac gaaaacgacc ccaaaattgc tgcaaatttc 540
ctttatcgca tagcgctgga tattcaatta aaactggaaa agcacttaaa atcaataaat 600
gaaaaactgg acactctaag caaagaaaat tcaaaaagaag atttagaggc gttgctagaa 660
caagtaaaat ctgccttaca gctacaagaa aagtttataaa aaaccctaaa caaaactctt 720
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<210> 726
<211> 717
<212> DNA
<213> Homo sapiens

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ggagaccttg gcgcttctga tgaaaaattt atgggaacta ccgcttcaga gctaaaagca 180
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gaaaaaatgc ttttaaaaag atttcttctt tcatcttttag attataaaaa agaaaacata 360
gagacattaa aagaaattct tgaaaaactc ataaataatt acgaaaacga ccccaaaatt 420
gctgcaaatt tccttttatcg catagcgctg gatattcaat taaaactgga aaagcactta 480
aatcaataa atgaaaaact ggacactcta agcaaagaaa attcaaaaga agatttagag 540
gcgttgctag aacaagtaaa atctgcctta cagctacaag aaaagtttaa aaaaacccta 600
aacaaaactc ttgaagatta ccgtaaaaaat actaacaaca ttcaagaaaa taaagtacta 660
gcagaacact ttaataaata ttacaaagac tctgattctt tacaatctgc cttttat 717

<210> 727
 <211> 274
 <212> PRT
 <213> Homo sapiens

<400> 727
 Leu Ile Leu Val Leu Ile Tyr Lys Glu Ser Ile Leu Lys Lys Ala Lys
 1 5 10 15
 Leu Asn Ile Ile Lys Ile Asn Ile Ile Thr Met Ile Leu Thr Leu Ile
 20 25 30
 Cys Ile Ser Cys Ala Pro Phe Asn Lys Ile Asn Pro Lys Ala Asn Glu
 35 40 45
 Asn Thr Lys Leu Lys Lys Asn Thr Arg Leu Lys Lys Pro Ala Asn Pro
 50 55 60
 Gly Glu Asn Ile Gln Asn Phe Lys Asp Lys Ser Gly Asp Leu Gly Ala
 65 70 75 80
 Ser Asp Glu Lys Phe Met Gly Thr Thr Ala Ser Glu Leu Lys Ala Ile
 85 90 95
 Gly Lys Glu Leu Glu Asp Arg Lys Asn Gln Tyr Asp Ile Gln Ile Ala
 100 105 110
 Lys Ile Thr Asn Glu Glu Ser Asn Leu Leu Asp Thr Tyr Ile Arg Ala
 115 120 125
 Tyr Glu Leu Ala Asn Glu Asn Glu Lys Met Leu Leu Lys Arg Phe Leu
 130 135 140
 Leu Ser Ser Leu Asp Tyr Lys Lys Glu Asn Ile Glu Thr Leu Lys Glu
 145 150 155 160
 Ile Leu Glu Lys Leu Ile Asn Asn Tyr Glu Asn Asp Pro Lys Ile Ala
 165 170 175
 Ala Asn Phe Leu Tyr Arg Ile Ala Leu Asp Ile Gln Leu Lys Leu Glu
 180 185 190
 Lys His Leu Lys Ser Ile Asn Glu Lys Leu Asp Thr Leu Ser Lys Glu
 195 200 205
 Asn Ser Lys Glu Asp Leu Glu Ala Leu Leu Glu Gln Val Lys Ser Ala
 210 215 220
 Leu Gln Leu Gln Glu Lys Phe Lys Lys Thr Leu Asn Lys Thr Leu Glu
 225 230 235 240
 Asp Tyr Arg Lys Asn Thr Asn Asn Ile Gln Glu Asn Lys Val Leu Ala
 245 250 255
 Glu His Phe Asn Lys Tyr Tyr Lys Asp Ser Asp Ser Leu Gln Ser Ala
 260 265 270
 Phe Tyr

<210> 728
 <211> 239
 <212> PRT
 <213> Homo sapiens

<400> 728
 Cys Ala Pro Phe Asn Lys Ile Asn Pro Lys Ala Asn Glu Asn Thr Lys
 1 5 10 15
 Leu Lys Lys Asn Thr Arg Leu Lys Lys Pro Ala Asn Pro Gly Glu Asn
 20 25 30
 Ile Gln Asn Phe Lys Asp Lys Ser Gly Asp Leu Gly Ala Ser Asp Glu
 35 40 45
 Lys Phe Met Gly Thr Thr Ala Ser Glu Leu Lys Ala Ile Gly Lys Glu
 50 55 60
 Leu Glu Asp Arg Lys Asn Gln Tyr Asp Ile Gln Ile Ala Lys Ile Thr
 65 70 75 80
 Asn Glu Glu Ser Asn Leu Leu Asp Thr Tyr Ile Arg Ala Tyr Glu Leu
 85 90 95
 Ala Asn Glu Asn Glu Lys Met Leu Leu Lys Arg Phe Leu Leu Ser Ser
 100 105 110
 Leu Asp Tyr Lys Lys Glu Asn Ile Glu Thr Leu Lys Glu Ile Leu Glu
 115 120 125
 Lys Leu Ile Asn Asn Tyr Glu Asn Asp Pro Lys Ile Ala Ala Asn Phe
 130 135 140
 Leu Tyr Arg Ile Ala Leu Asp Ile Gln Leu Lys Leu Glu Lys His Leu
 145 150 155 160
 Lys Ser Ile Asn Glu Lys Leu Asp Thr Leu Ser Lys Glu Asn Ser Lys
 165 170 175
 Glu Asp Leu Glu Ala Leu Leu Glu Gln Val Lys Ser Ala Leu Gln Leu
 180 185 190
 Gln Glu Lys Phe Lys Lys Thr Leu Asn Lys Thr Leu Glu Asp Tyr Arg
 195 200 205
 Lys Asn Thr Asn Asn Ile Gln Glu Asn Lys Val Leu Ala Glu His Phe
 210 215 220
 Asn Lys Tyr Tyr Lys Asp Ser Asp Ser Leu Gln Ser Ala Phe Tyr
 225 230 235

<210> 729
 <211> 783
 <212> DNA
 <213> Homo sapiens

<400> 729
 tgatttaatg taaatttttaa ttaccgccta aaaaaggctt taaatgggtat aaaggaagaa 60
 gatctaattg tatttagaac atataaacat ttggaactaa taatgctgcc catgttaatg 120

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ctgagttgcg ctttttttaa gaaaccacaa tctgtacatc aagacagcaa tactggcaaa 180
ccaataagcg atgaaaaatt acatttaata tcaggcaaaa tttcaaataa aaaattgcc 240
atcataaata gtaatcatga cgtaacttgg ataaaaacaa aggcaatgac aatcttaggc 300
gaagatggaa aagaaatacc agaatttaaa aacaaatttg gatattctta tataatatct 360
cctgtaaaaa tggatggaaa atatagttat tacgcgtcat tattaatact ttttgaaaca 420
actaaaaatg gagatgatga atatgaaatt gaagatgtta aatttgtaac agctggttcc 480
accctagaac ttaaaaattc tcttttagct gttgaaaatt cacaagaaga aggatatgtt 540
actgcatacc catttggaat attgatgagt gacgagatta aaaatgcttt taaattaaca 600
tataaaaatg gtcattggaa ttatatgctt gcagatttaa ctgtcaaaaa taaacttact 660
caagaaacta aaatttataa aatttctctt aattcaaaat taattattga atttttaaaa 720
gaagtgctaa aagaaaattc tatattaata gacatagctg gagatttatt tgaagatata 780
taa
783

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<210> 730
 <211> 654
 <212> DNA
 <213> Homo sapiens

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<400> 730
tgcgcttttt ttaagaaacc acaatctgta catcaagaca gcaatactgg caaaccaata 60
agcgatgaaa aattacattt aatatcaggc aaaatttcaa ataaaaaatt gccaatcata 120
aatagtaatc atgacgtaac ttggataaaa acaaaggcaa tgacaatctt aggcgaagat 180
ggaaaaagaaa taccagaatt taaaaacaaa tttggatatt cttatataat atctcctgta 240
aaaatggatg gaaaatatag ttattacgcg tcattattaa tactttttga aacaactaaa 300
aatggagatg atgaatatga aattgaagat gttaaatttg taacagctgg ttccacccta 360
gaacttaaaa atttctcttt agctgttgaa aattcacaag aagaaggata tgttactgca 420
taccattttg gaattattgat gagtgcagag attaaaaatg cttttaaatt aacatataaa 480
aatggtcatt ggaattatat gcttgcagat ttaactgtca aaaataaact tactcaagaa 540
actaaaattt ataaaatttc tcttaattca aaattaatta ttgaattttt aaaagaagt 600
ctaaaagaaa attctatatt aaaagacata gctggagatt tatttgaaga tata 654

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<210> 731
 <211> 259
 <212> PRT
 <213> Homo sapiens

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<400> 731
Phe Asn Val Asn Phe Asn Tyr Arg Leu Lys Lys Ala Leu Asn Gly Ile
  1                      5                      10                      15

Lys Glu Glu Asp Leu Met Val Phe Arg Thr Tyr Lys His Leu Glu Leu
          20                      25                      30

Ile Met Leu Pro Met Leu Met Leu Ser Cys Ala Phe Phe Lys Lys Pro
          35                      40                      45

Gln Ser Val His Gln Asp Ser Asn Thr Gly Lys Pro Ile Ser Asp Glu
          50                      55                      60

Lys Leu His Leu Ile Ser Gly Lys Ile Ser Asn Lys Lys Leu Pro Ile
          65                      70                      75                      80

Ile Asn Ser Asn His Asp Val Thr Trp Ile Lys Thr Lys Ala Met Thr
          85                      90                      95

Ile Leu Gly Glu Asp Gly Lys Glu Ile Pro Glu Phe Lys Asn Lys Phe
          100                     105                     110

Gly Tyr Ser Tyr Ile Ile Ser Pro Val Lys Met Asp Gly Lys Tyr Ser
          115                     120                     125

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Tyr Tyr Ala Ser Leu Leu Ile Leu Phe Glu Thr Thr Lys Asn Gly Asp
 130 135 140

Asp Glu Tyr Glu Ile Glu Asp Val Lys Phe Val Thr Ala Gly Ser Thr
 145 150 155 160

Leu Glu Leu Lys Asn Ser Leu Leu Ala Val Glu Asn Ser Gln Glu Glu
 165 170 175

Gly Tyr Val Thr Ala Tyr Pro Phe Gly Ile Leu Met Ser Asp Glu Ile
 180 185 190

Lys Asn Ala Phe Lys Leu Thr Tyr Lys Asn Gly His Trp Asn Tyr Met
 195 200 205

Leu Ala Asp Leu Thr Val Lys Asn Lys Leu Thr Gln Glu Thr Lys Ile
 210 215 220

Tyr Lys Ile Ser Leu Asn Ser Lys Leu Ile Ile Glu Phe Leu Lys Glu
 225 230 235 240

Val Leu Lys Glu Asn Ser Ile Leu Lys Asp Ile Ala Gly Asp Leu Phe
 245 250 255

Glu Asp Ile

<210> 732

<211> 218

<212> PRT

<213> Homo sapiens

<400> 732

Cys Ala Phe Phe Lys Lys Pro Gln Ser Val His Gln Asp Ser Asn Thr
 1 5 10 15

Gly Lys Pro Ile Ser Asp Glu Lys Leu His Leu Ile Ser Gly Lys Ile
 20 25 30

Ser Asn Lys Lys Leu Pro Ile Ile Asn Ser Asn His Asp Val Thr Trp
 35 40 45

Ile Lys Thr Lys Ala Met Thr Ile Leu Gly Glu Asp Gly Lys Glu Ile
 50 55 60

Pro Glu Phe Lys Asn Lys Phe Gly Tyr Ser Tyr Ile Ile Ser Pro Val
 65 70 75 80

Lys Met Asp Gly Lys Tyr Ser Tyr Tyr Ala Ser Leu Leu Ile Leu Phe
 85 90 95

Glu Thr Thr Lys Asn Gly Asp Asp Glu Tyr Glu Ile Glu Asp Val Lys
 100 105 110

Phe Val Thr Ala Gly Ser Thr Leu Glu Leu Lys Asn Ser Leu Leu Ala
 115 120 125

Val Glu Asn Ser Gln Glu Glu Gly Tyr Val Thr Ala Tyr Pro Phe Gly
 130 135 140

Ile Leu Met Ser Asp Glu Ile Lys Asn Ala Phe Lys Leu Thr Tyr Lys
 145 150 155 160

Asn Gly His Trp Asn Tyr Met Leu Ala Asp Leu Thr Val Lys Asn Lys
 165 170 175

Leu Thr Gln Glu Thr Lys Ile Tyr Lys Ile Ser Leu Asn Ser Lys Leu
 180 185 190

Ile Ile Glu Phe Leu Lys Glu Val Leu Lys Glu Asn Ser Ile Leu Lys
 195 200 205

Asp Ile Ala Gly Asp Leu Phe Glu Asp Ile
 210 215

<210> 733
 <211> 1212
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (877)
 <223> n equals a,t,g, or c

<400> 733
 taattaccaa agataagtaa acttgcaaat aaaactacac gtattgaaag tagatttgaa 60
 atttccatta tatttatata taatggcact aaatatctga aaatgaagga gaagcgggtg 120
 ggcaataaaa ttttttatat ttcagtgggt ttaattttta tagttgggtg cgactgggga 180
 actattaaag ataaaagtac agaaatttcc aagctattaa gaacggacaa agataagact 240
 aaaaatcaag atagaataga attgggtgaa gataattttg tatctaaaaa taatatgtct 300
 actactgata cgggcattac tagtttagga agtctaaaca acttggattt aattaatcgt 360
 tcacagcggg tcagtgaacc acctataatc tcaaatgaga aagccatagc tactcaagca 420
 aaagtagatt taatgaacaa cattaatggt actataataa acccaaaacc agtcaaaat 480
 ttgggaaatt ctttaaacaa tactactact gaagatagtg tgaagttttt atcaattgaa 540
 aaccaagagt ggcttattag taaaaagatt ttgccagta agttggaaaa ttagaaaagc 600
 tttctaaaaa cacaacacga aaaagaagct tttaagacgg ctaaaactat acaaagtctc 660
 attagtaatt ccaatatggg taaagaaatt attaagttta aggaagaata ttacaaactt 720
 tataatttgt ttgaaggcat acaacaaaaa ttccatagtc aaaggaattc atttataaaa 780
 gatactaaat ttggggaaaa tagacaaaaa aatgcagtta tatttaaata cttttcatct 840
 atagagaaaag aaattagaga tttgaattat aagttgngtg aaatccaaag taattttcaa 900
 attgcagatg ttagctggaa taatgcaaac tctcttttaa aagaatctat agaaaaatta 960
 attcaggcaa ttgaaaaaag gtatgacaat gagagtagaa agcaagggtca aattggtgga 1020
 cctgctaata gatgggataa aaatcaagct gacaattttg ctaaggatgc aaagtataag 1080
 gcagaacatt cagcaaatga tttggaaaat gcagccaact attttagata tagttgttca 1140
 aatgaaaaag aagctaaaaa gctattagaa gaaattaaaa aaagatttgt acgaattggt 1200
 attagcctat aa 1212

<210> 734
 <211> 1041
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (709)
 <223> n equals a,t,g, or c

<400> 734

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tgcgactggg gaactattaa agataaaagt acagaaattt ccaagctatt aagaacggac 60
aaagataaga ctaaaaatca agatagaata gaattgggtg aagataattt tgtatctaaa 120
aataatatgt ctactactga tacgggcatt actagtttag gaagtctaaa caacttggat 180
ttaattaatc gttcacagcg ggtcagtga ccacctataa tctcaaata gaaagccata 240
gctactcaag caaaagtaga tttaatgaac aacattaatg ttactataat aaacccaaaa 300
ccagctcaaa atttgggaaa ttctttaaac aatactacta ctgaagatag tgtgaagttt 360
ttatcaattg aaaaccaaga gtggcttatt agtaaaaaga ttttgcccag taagttggaa 420
aatttagaaa gctttctaaa aacacaacac gaaaaagaag cttttaagac ggctaaaact 480
atacaaagtc tcattagtaa ttccaatatg ggtaaagaaa ttattaagtt taaggaagaa 540
tattacaaac tttataattt gtttgaaggc atacaacaaa aattccatag tcaaaggaat 600
tcatttataa aagatactaa atttggggaa aatagacaaa aaaatgcagt tatattttaa 660
tccttttcat ctatagagaa agaaattaga gatttgaatt ataagttgng tgaaatccaa 720
agtaattttc aaattgcaga tgtagctgg aataatgcaa actctctttt aaaagaatct 780
atagaaaaat taattcaggc aattgaaaaa aggtatgaca atgagagtag aaagcaaggt 840
caaattgggtg gacctgctaa tagatgggat aaaaatcaag ctgacaattt tgctaaggat 900
gcaaagtata aggcagaaca ttcagcaaat gatttggaaa atgcagccaa ctattttaga 960
tatagttgtt caaatgaaaa agaagctaaa aagctattag aagaaattaa aaaaagattt 1020
gtacgaattg gtattagcct a 1041

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<210> 735

<211> 402

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (292)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 735

Leu Pro Lys Ile Ser Lys Leu Ala Asn Lys Thr Thr Arg Ile Glu Ser
1 5 10 15

Arg Phe Glu Ile Ser Ile Ile Phe Ile Tyr Asn Gly Thr Lys Tyr Leu
20 25 30

Lys Met Lys Glu Lys Arg Val Gly Asn Lys Ile Phe Tyr Ile Ser Val
35 40 45

Val Leu Ile Leu Ile Val Gly Cys Asp Trp Gly Thr Ile Lys Asp Lys
50 55 60

Ser Thr Glu Ile Ser Lys Leu Leu Arg Thr Asp Lys Asp Lys Thr Lys
65 70 75 80

Asn Gln Asp Arg Ile Glu Leu Gly Glu Asp Asn Phe Val Ser Lys Asn
85 90 95

Asn Met Ser Thr Thr Asp Thr Gly Ile Thr Ser Leu Gly Ser Leu Asn
100 105 110

Asn Leu Asp Leu Ile Asn Arg Ser Gln Arg Val Ser Glu Pro Pro Ile
115 120 125

Ile Ser Asn Glu Lys Ala Ile Ala Thr Gln Ala Lys Val Asp Leu Met
130 135 140

Asn Asn Ile Asn Val Thr Ile Ile Asn Pro Lys Pro Ala Gln Asn Leu
145 150 155 160

Gly Asn Ser Leu Asn Asn Thr Thr Thr Glu Asp Ser Val Lys Phe Leu
 165 170 175
 Ser Ile Glu Asn Gln Glu Trp Leu Ile Ser Lys Lys Ile Leu Pro Ser
 180 185 190
 Lys Leu Glu Asn Leu Glu Ser Phe Leu Lys Thr Gln His Glu Lys Glu
 195 200 205
 Ala Phe Lys Thr Ala Lys Thr Ile Gln Ser Leu Ile Ser Asn Ser Asn
 210 215 220
 Met Gly Lys Glu Ile Ile Lys Phe Lys Glu Glu Tyr Tyr Lys Leu Tyr
 225 230 235 240
 Asn Leu Phe Glu Gly Ile Gln Gln Lys Phe His Ser Gln Arg Asn Ser
 245 250 255
 Phe Ile Lys Asp Thr Lys Phe Gly Glu Asn Arg Gln Lys Asn Ala Val
 260 265 270
 Ile Phe Lys Ser Phe Ser Ser Ile Glu Lys Glu Ile Arg Asp Leu Asn
 275 280 285
 Tyr Lys Leu Xaa Glu Ile Gln Ser Asn Phe Gln Ile Ala Asp Val Ser
 290 295 300
 Trp Asn Asn Ala Asn Ser Leu Leu Lys Glu Ser Ile Glu Lys Leu Ile
 305 310 315 320
 Gln Ala Ile Glu Lys Arg Tyr Asp Asn Glu Ser Arg Lys Gln Gly Gln
 325 330 335
 Ile Gly Gly Pro Ala Asn Arg Trp Asp Lys Asn Gln Ala Asp Asn Phe
 340 345 350
 Ala Lys Asp Ala Lys Tyr Lys Ala Glu His Ser Ala Asn Asp Leu Glu
 355 360 365
 Asn Ala Ala Asn Tyr Phe Arg Tyr Ser Cys Ser Asn Glu Lys Glu Ala
 370 375 380
 Lys Lys Leu Leu Glu Glu Ile Lys Lys Arg Phe Val Arg Ile Gly Ile
 385 390 395 400
 Ser Leu

<210> 736

<211> 347

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (237)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 736

Cys Asp Trp Gly Thr Ile Lys Asp Lys Ser Thr Glu Ile Ser Lys Leu

1	5	10	15
Leu Arg Thr Asp Lys Asp Lys Thr Lys Asn Gln Asp Arg Ile Glu Leu	20	25	30
Gly Glu Asp Asn Phe Val Ser Lys Asn Asn Met Ser Thr Thr Asp Thr	35	40	45
Gly Ile Thr Ser Leu Gly Ser Leu Asn Asn Leu Asp Leu Ile Asn Arg	50	55	60
Ser Gln Arg Val Ser Glu Pro Pro Ile Ile Ser Asn Glu Lys Ala Ile	65	70	75
Ala Thr Gln Ala Lys Val Asp Leu Met Asn Asn Ile Asn Val Thr Ile	85	90	95
Ile Asn Pro Lys Pro Ala Gln Asn Leu Gly Asn Ser Leu Asn Asn Thr	100	105	110
Thr Thr Glu Asp Ser Val Lys Phe Leu Ser Ile Glu Asn Gln Glu Trp	115	120	125
Leu Ile Ser Lys Lys Ile Leu Pro Ser Lys Leu Glu Asn Leu Glu Ser	130	135	140
Phe Leu Lys Thr Gln His Glu Lys Glu Ala Phe Lys Thr Ala Lys Thr	145	150	155
Ile Gln Ser Leu Ile Ser Asn Ser Asn Met Gly Lys Glu Ile Ile Lys	165	170	175
Phe Lys Glu Glu Tyr Tyr Lys Leu Tyr Asn Leu Phe Glu Gly Ile Gln	180	185	190
Gln Lys Phe His Ser Gln Arg Asn Ser Phe Ile Lys Asp Thr Lys Phe	195	200	205
Gly Glu Asn Arg Gln Lys Asn Ala Val Ile Phe Lys Ser Phe Ser Ser	210	215	220
Ile Glu Lys Glu Ile Arg Asp Leu Asn Tyr Lys Leu Xaa Glu Ile Gln	225	230	235
Ser Asn Phe Gln Ile Ala Asp Val Ser Trp Asn Asn Ala Asn Ser Leu	245	250	255
Leu Lys Glu Ser Ile Glu Lys Leu Ile Gln Ala Ile Glu Lys Arg Tyr	260	265	270
Asp Asn Glu Ser Arg Lys Gln Gly Gln Ile Gly Gly Pro Ala Asn Arg	275	280	285
Trp Asp Lys Asn Gln Ala Asp Asn Phe Ala Lys Asp Ala Lys Tyr Lys	290	295	300
Ala Glu His Ser Ala Asn Asp Leu Glu Asn Ala Ala Asn Tyr Phe Arg	305	310	315
Tyr Ser Cys Ser Asn Glu Lys Glu Ala Lys Lys Leu Leu Glu Glu Ile			

325

330

335

Lys Lys Arg Phe Val Arg Ile Gly Ile Ser Leu
340 345

<210> 737

<211> 447

<212> DNA

<213> Homo sapiens

<400> 737

taaataaatt gtaggataaa aatgaaacaa aaatacgaaa actatttttaa aaaaagatta 60
atatttaaacc tattaatatt ttactacta gcatgctcaa gcgaatccat attttcacaa 120
ttaggaaatc tgcaaaaaat aaaacatgaa tacaatattt tgggcagttc aagtccaaga 180
ggaattttctc tagtaggaga aactctctac attgcagcca tgcattttatt taaaaaagaa 240
aacggcaaga ttgaaaaaat tgatttgagc aattcttatg agtttataaa cgacattgta 300
aatatatctg gaaaaaccta tcttttagcg caaaacaaag aagaagaatt agaagtttgc 360
gagctaaatg gaaaagattg gacattaaaa tttaaaaaac cgctaaaagc atataaattc 420
ttaaaatccg tagaagagat ggcgtaa 447

<210> 738

<211> 351

<212> DNA

<213> Homo sapiens

<400> 738

tgctcaagcg aatccatatt ttcacaatta ggaaatctgc aaaaaataaa acatgaatac 60
aatatttttg gcagttcaag tccaagagga atttctctag taggagaaac tctctacatt 120
gcagccatgc atttatttta aaaaagaaaac ggcaagattg aaaaaattga tttgagcaat 180
tcttatgagt ttataaacga cattgtaaat atatctggaa aaacctatct tttagcgcaa 240
aacaaagaag aagaattaga agtttgcgag ctaaattggaa aagattggac attaaaattt 300
aaaaaaccgc taaaagcata taaattctta aaatccgtag aagagatggc g 351

<210> 739

<211> 147

<212> PRT

<213> Homo sapiens

<400> 739

Ile Asn Cys Arg Ile Lys Met Lys Gln Lys Tyr Glu Asn Tyr Phe Lys
1 5 10 15

Lys Arg Leu Ile Leu Asn Leu Leu Ile Phe Leu Leu Leu Ala Cys Ser
20 25 30

Ser Glu Ser Ile Phe Ser Gln Leu Gly Asn Leu Gln Lys Ile Lys His
35 40 45

Glu Tyr Asn Ile Leu Gly Ser Ser Ser Pro Arg Gly Ile Ser Leu Val
50 55 60

Gly Glu Thr Leu Tyr Ile Ala Ala Met His Leu Phe Lys Lys Glu Asn
65 70 75 80

Gly Lys Ile Glu Lys Ile Asp Leu Ser Asn Ser Tyr Glu Phe Ile Asn
85 90 95

Asp Ile Val Asn Ile Ser Gly Lys Thr Tyr Leu Leu Ala Gln Asn Lys
100 105 110

Glu Glu Glu Leu Glu Val Cys Glu Leu Asn Gly Lys Asp Trp Thr Leu
 115 120 125

Lys Phe Lys Lys Pro Leu Lys Ala Tyr Lys Phe Leu Lys Ser Val Glu
 130 135 140

Glu Met Ala
 145

<210> 740
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 740
 Cys Ser Ser Glu Ser Ile Phe Ser Gln Leu Gly Asn Leu Gln Lys Ile
 1 5 10 15

Lys His Glu Tyr Asn Ile Leu Gly Ser Ser Ser Pro Arg Gly Ile Ser
 20 25 30

Leu Val Gly Glu Thr Leu Tyr Ile Ala Ala Met His Leu Phe Lys Lys
 35 40 45

Glu Asn Gly Lys Ile Glu Lys Ile Asp Leu Ser Asn Ser Tyr Glu Phe
 50 55 60

Ile Asn Asp Ile Val Asn Ile Ser Gly Lys Thr Tyr Leu Leu Ala Gln
 65 70 75 80

Asn Lys Glu Glu Glu Leu Glu Val Cys Glu Leu Asn Gly Lys Asp Trp
 85 90 95

Thr Leu Lys Phe Lys Lys Pro Leu Lys Ala Tyr Lys Phe Leu Lys Ser
 100 105 110

Val Glu Glu Met Ala
 115

<210> 741
 <211> 564
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (248)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (249)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (251)
 <223> n equals a,t,g, or c

<220>

<221> misc_feature

<222> (260)

<223> n equals a,t,g, or c

<400> 741

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tgttatttgc ctgataatca ggaacaagct gttcaaactt tttttgagaa ttcggaaagt 120
agtgatatgg gttccgatga gattgttact gaaggcatat tttctagttt aaaattatat 180
gcgtctgaac atcgtttatt ggttgagata aaaaagactt taattagttt aaaagatcct 240
aattatcnng ntgtagtacn cccagtgagt gactataatg aggagtattt taataaattc 300
tttctagatt tagggctctga gcaatctaaa gacctgatta agttgtttat tatggtaaaa 360
aatgagcaga acaataataa atttatgcgt atagtccgtt ggctgtattc atgtatagag 420
gagttatatt ctctagatat taagtattct ggcgagggga gccatgagta taatcgtaat 480
atgcctagac ccactgctta tgaacaatat ttaaaagtga agaggtatga ttataatagc 540
ccagtttcta ttttacctac ataa 564
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<210> 742

<211> 477

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (188)

<223> n equals a,t,g, or c

<220>

<221> misc_feature

<222> (189)

<223> n equals a,t,g, or c

<220>

<221> misc_feature

<222> (191)

<223> n equals a,t,g, or c

<220>

<221> misc_feature

<222> (200)

<223> n equals a,t,g, or c

<400> 742

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tgttatttgc ctgataatca ggaacaagct gttcaaactt tttttgagaa ttcggaaagt 60
agtgatatgg gttccgatga gattgttact gaaggcatat tttctagttt aaaattatat 120
gcgtctgaac atcgtttatt ggttgagata aaaaagactt taattagttt aaaagatcct 180
aattatcnng ntgtagtacn cccagtgagt gactataatg aggagtattt taataaattc 240
tttctagatt tagggctctga gcaatctaaa gacctgatta agttgtttat tatggtaaaa 300
aatgagcaga acaataataa atttatgcgt atagtccgtt ggctgtattc atgtatagag 360
gagttatatt ctctagatat taagtattct ggcgagggga gccatgagta taatcgtaat 420
atgcctagac ccactgctta tgaacaatat ttaaaagtga agaggtatga ttataat 477
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<210> 743

<211> 186

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (82)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (83)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (86)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 743
 Gly Ala Tyr Met Arg Ile Leu Val Gly Val Cys Ile Ile Ala Leu Ala
 1 5 10 15
 Leu Leu Gly Cys Tyr Leu Pro Asp Asn Gln Glu Gln Ala Val Gln Thr
 20 25 30
 Phe Phe Glu Asn Ser Glu Ser Ser Asp Met Gly Ser Asp Glu Ile Val
 35 40 45
 Thr Glu Gly Ile Phe Ser Ser Leu Lys Leu Tyr Ala Ser Glu His Arg
 50 55 60
 Leu Leu Val Glu Ile Lys Lys Thr Leu Ile Ser Leu Lys Asp Pro Asn
 65 70 75 80
 Tyr Xaa Xaa Val Val Xaa Pro Val Ser Asp Tyr Asn Glu Glu Tyr Phe
 85 90 95
 Asn Lys Phe Phe Leu Asp Leu Gly Ser Glu Gln Ser Lys Asp Leu Ile
 100 105 110
 Lys Leu Phe Ile Met Val Lys Asn Glu Gln Asn Asn Asn Lys Phe Met
 115 120 125
 Arg Ile Val Arg Trp Leu Tyr Ser Cys Ile Glu Glu Leu Tyr Ser Leu
 130 135 140
 Asp Ile Lys Tyr Ser Gly Glu Gly Ser His Glu Tyr Asn Arg Asn Met
 145 150 155 160
 Pro Arg Pro Thr Ala Tyr Glu Gln Tyr Leu Lys Val Lys Arg Tyr Asp
 165 170 175
 Tyr Asn Ser Pro Val Ser Ile Leu Pro Thr
 180 185

<210> 744
 <211> 159
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (63)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE

<222> (64)
 <223> Xaa equals any of the naturally occurring L-amino acids

 <220>
 <221> SITE
 <222> (67)
 <223> Xaa equals any of the naturally occurring L-amino acids

 <400> 744
 Cys Tyr Leu Pro Asp Asn Gln Glu Gln Ala Val Gln Thr Phe Phe Glu
 1 5 10 15
 Asn Ser Glu Ser Ser Asp Met Gly Ser Asp Glu Ile Val Thr Glu Gly
 20 25 30
 Ile Phe Ser Ser Leu Lys Leu Tyr Ala Ser Glu His Arg Leu Leu Val
 35 40 45
 Glu Ile Lys Lys Thr Leu Ile Ser Leu Lys Asp Pro Asn Tyr Xaa Xaa
 50 55 60
 Val Val Xaa Pro Val Ser Asp Tyr Asn Glu Glu Tyr Phe Asn Lys Phe
 65 70 75 80
 Phe Leu Asp Leu Gly Ser Glu Gln Ser Lys Asp Leu Ile Lys Leu Phe
 85 90 95
 Ile Met Val Lys Asn Glu Gln Asn Asn Asn Lys Phe Met Arg Ile Val
 100 105 110
 Arg Trp Leu Tyr Ser Cys Ile Glu Glu Leu Tyr Ser Leu Asp Ile Lys
 115 120 125
 Tyr Ser Gly Glu Gly Ser His Glu Tyr Asn Arg Asn Met Pro Arg Pro
 130 135 140
 Thr Ala Tyr Glu Gln Tyr Leu Lys Val Lys Arg Tyr Asp Tyr Asn
 145 150 155

 <210> 745
 <211> 1011
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> misc_feature
 <222> (557)
 <223> n equals a,t,g, or c

 <220>
 <221> misc_feature
 <222> (572)
 <223> n equals a,t,g, or c

 <220>
 <221> misc_feature
 <222> (573)
 <223> n equals a,t,g, or c

 <220>

<221> misc_feature
 <222> (893)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (897)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (906)
 <223> n equals a,t,g, or c

<400> 745
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 gcagagggtt ctaaaagggc agagcctgga gaattagttt tagatttttg cgagcttgca 120
 agagatccaa gttcaactag acttgatctt acaaattatg ttgattatgt atattcgggc 180
 gcttctggta ttgttaagcc ggaagatatg gttgtagatc ttgggataaa taattggagc 240
 gttttactta ctcttctgc aagggtgcag gcttacgtta aaaattcagt tgttgcgccc 300
 gctgttggtta agagtgagtc aaaaaggtac gcagggtgata ctattttagg ggtaagagtt 360
 ttgtttccaa gctattctca atcatctgct atgattatgc caccatttaa aattcctttt 420
 tattcagggg aaagtggcaa tcaattttta ggcaaaggct ttattgataa cattaataacc 480
 atgaaagaaa ttaaggtatc tgtttatagt ttaggggatg agatagatct tgaggtttta 540
 tttgaagata tgaatgncat ggaatatgct tnnctatgg gtacttttaa gtttaaaggg 600
 tgggctgatt taatttggtc aaatcctaac tatattccta atatatcatc cagaattatt 660
 aaagacgatg ttccaaatta tcctcttgct tcaagtaaaa tgagatttaa ggcttttaga 720
 gtttcaaagt cacacagttc aaaagagcaa aatttcattc tttatgttaa agatttaaga 780
 gttcttttatg ataagttgag tgtttcaata gattctgata ttgacagtga gtctgtattt 840
 aaagtttatg agactagcgg aactgaatcc ctctgtaaat taaaggcaca cgnaacnttt 900
 aaaagngttt taaagcttag agaaaaaatt tctatgcctg aaggctcttt ccaaaaacttt 960
 gtagaaaaga ttgagagtga aaaacctgaa gaatcatctc cgaaaaatta g 1011

<210> 746
 <211> 945
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (494)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (509)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (510)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (830)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature

<222> (834)
 <223> n equals a,t,g, or c

<220>
 <221> misc_feature
 <222> (843)
 <223> n equals a,t,g, or c

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<400> 746
gagggttcta aaagggcaga gcctggagaa ttagtttttag attttgccga gcttgcaaga 60
gatccaagtt caactagact tgatcttaca aattatgttg attatgtata ttcgggcgct 120
tctgggtattg ttaagccgga agatatggtt gtagatcttg ggataaataa ttggagcggt 180
ttacttactc cttctgcaag gttgcaggct tacgttaaaa attcagttgt tgcgcccgt 240
gttggttaaga gtgagtcaaa aaggtacgca ggtgatacta ttttaggggt aagagttttg 300
tttccaagct attctcaatc atctgctatg attatgccac catttaaaat tcctttttat 360
tcaggggaaa gtggcaatca atttttaggc aaaggtctta ttgataacat taaaaccatg 420
aaagaaatta aggtatctgt ttatagttta gggtagtga tagatcttga gggttttatt 480
gaagatatga atgncatgga atatgcttnn tctatgggta ctttaaagtt taaagggtgg 540
gctgatttaa tttgggtcaaa tcctaactat attcctaata tatcatccag aattattaaa 600
gacgatgttc caaattatcc tcttgcttca agtaaaatga gatttaaggc ttttagagtt 660
tcaaagtcac acagttcaaa agagcaaaat ttcactcttt atgttaaaga ttttaagagtt 720
ctttatgata agttgagtgt ttcaatagat tctgatattg acagtgaagtc tgtattttaaa 780
gtttatgaga ctacggaac tgaatccctt cgtaaattaa aggcacacgn aacnttttaa 840
agngttttta agcttagaga aaaaatttct atgcctgaag gctctttcca aaactttgta 900
gaaaagattg agagtgaaaa acctgaagaa tcactctccga aaaat 945
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<210> 747
 <211> 335
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (185)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (190)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (297)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (301)
 <223> Xaa equals any of the naturally occurring L-amino acids

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<400> 747
Ser Ile Leu Phe Phe Leu Leu Ser Thr Val Leu Phe Ala Gln Glu Thr
  1             5             10             15

Asp Gly Leu Ala Glu Gly Ser Lys Arg Ala Glu Pro Gly Glu Leu Val
      20             25             30

Leu Asp Phe Ala Glu Leu Ala Arg Asp Pro Ser Ser Thr Arg Leu Asp
      35             40             45
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Leu Thr Asn Tyr Val Asp Tyr Val Tyr Ser Gly Ala Ser Gly Ile Val
 50 55 60
 Lys Pro Glu Asp Met Val Val Asp Leu Gly Ile Asn Asn Trp Ser Val
 65 70 75 80
 Leu Leu Thr Pro Ser Ala Arg Leu Gln Ala Tyr Val Lys Asn Ser Val
 85 90 95
 Val Ala Pro Ala Val Val Lys Ser Glu Ser Lys Arg Tyr Ala Gly Asp
 100 105 110
 Thr Ile Leu Gly Val Arg Val Leu Phe Pro Ser Tyr Ser Gln Ser Ser
 115 120 125
 Ala Met Ile Met Pro Pro Phe Lys Ile Pro Phe Tyr Ser Gly Glu Ser
 130 135 140
 Gly Asn Gln Phe Leu Gly Lys Gly Leu Ile Asp Asn Ile Lys Thr Met
 145 150 155 160
 Lys Glu Ile Lys Val Ser Val Tyr Ser Leu Gly Tyr Glu Ile Asp Leu
 165 170 175
 Glu Val Leu Phe Glu Asp Met Asn Xaa Met Glu Tyr Ala Xaa Ser Met
 180 185 190
 Gly Thr Leu Lys Phe Lys Gly Trp Ala Asp Leu Ile Trp Ser Asn Pro
 195 200 205
 Asn Tyr Ile Pro Asn Ile Ser Ser Arg Ile Ile Lys Asp Asp Val Pro
 210 215 220
 Asn Tyr Pro Leu Ala Ser Ser Lys Met Arg Phe Lys Ala Phe Arg Val
 225 230 235 240
 Ser Lys Ser His Ser Ser Lys Glu Gln Asn Phe Ile Phe Tyr Val Lys
 245 250 255
 Asp Leu Arg Val Leu Tyr Asp Lys Leu Ser Val Ser Ile Asp Ser Asp
 260 265 270
 Ile Asp Ser Glu Ser Val Phe Lys Val Tyr Glu Thr Ser Gly Thr Glu
 275 280 285
 Ser Leu Arg Lys Leu Lys Ala His Xaa Thr Phe Lys Xaa Val Leu Lys
 290 295 300
 Leu Arg Glu Lys Ile Ser Met Pro Glu Gly Ser Phe Gln Asn Phe Val
 305 310 315 320
 Glu Lys Ile Glu Ser Glu Lys Pro Glu Glu Ser Ser Pro Lys Asn
 325 330 335

<210> 748
 <211> 315
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (165)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (170)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (277)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (281)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 748
 Glu Gly Ser Lys Arg Ala Glu Pro Gly Glu Leu Val Leu Asp Phe Ala
 1 5 10 15
 Glu Leu Ala Arg Asp Pro Ser Ser Thr Arg Leu Asp Leu Thr Asn Tyr
 20 25 30
 Val Asp Tyr Val Tyr Ser Gly Ala Ser Gly Ile Val Lys Pro Glu Asp
 35 40 45
 Met Val Val Asp Leu Gly Ile Asn Asn Trp Ser Val Leu Leu Thr Pro
 50 55 60
 Ser Ala Arg Leu Gln Ala Tyr Val Lys Asn Ser Val Val Ala Pro Ala
 65 70 75 80
 Val Val Lys Ser Glu Ser Lys Arg Tyr Ala Gly Asp Thr Ile Leu Gly
 85 90 95
 Val Arg Val Leu Phe Pro Ser Tyr Ser Gln Ser Ser Ala Met Ile Met
 100 105 110
 Pro Pro Phe Lys Ile Pro Phe Tyr Ser Gly Glu Ser Gly Asn Gln Phe
 115 120 125
 Leu Gly Lys Gly Leu Ile Asp Asn Ile Lys Thr Met Lys Glu Ile Lys
 130 135 140
 Val Ser Val Tyr Ser Leu Gly Tyr Glu Ile Asp Leu Glu Val Leu Phe
 145 150 155 160
 Glu Asp Met Asn Xaa Met Glu Tyr Ala Xaa Ser Met Gly Thr Leu Lys
 165 170 175
 Phe Lys Gly Trp Ala Asp Leu Ile Trp Ser Asn Pro Asn Tyr Ile Pro
 180 185 190
 Asn Ile Ser Ser Arg Ile Ile Lys Asp Asp Val Pro Asn Tyr Pro Leu
 195 200 205

Ala Ser Ser Lys Met Arg Phe Lys Ala Phe Arg Val Ser Lys Ser His
210 215 220

Ser Ser Lys Glu Gln Asn Phe Ile Phe Tyr Val Lys Asp Leu Arg Val
225 230 235 240

Leu Tyr Asp Lys Leu Ser Val Ser Ile Asp Ser Asp Ile Asp Ser Glu
245 250 255

Ser Val Phe Lys Val Tyr Glu Thr Ser Gly Thr Glu Ser Leu Arg Lys
260 265 270

Leu Lys Ala His Xaa Thr Phe Lys Xaa Val Leu Lys Leu Arg Glu Lys
275 280 285

Ile Ser Met Pro Glu Gly Ser Phe Gln Asn Phe Val Glu Lys Ile Glu
290 295 300

Ser Glu Lys Pro Glu Glu Ser Ser Pro Lys Asn
305 310 315

<210> 749
<211> 477
<212> DNA
<213> Homo sapiens

<400> 749
tgaatattaa taataaaaaa aggagtaaca atgaaaatca tcaacatatt attttgttta 60
tttttactaa tgctaaacgg ctgtaattct aatgataatg acacttttaa aaacaatgcc 120
caacaaacaa aaagacgggg aaagcgtgat ttaacccaaa aagaaacaac acaagaaaaa 180
ccaaaatcta aagaagaact acttagagaa aagctatctg acgatcaaaa aacacatctt 240
gactggttaa aaccgcgttt aactggtgct ggagaatttg acaaattctt agaaaaatgat 300
gatgataaaa taaaatcagc acttgatcat ataaaaactc aacttgatag ttgtaatggt 360
gatcaagcag aacaacaaaa aaccactttc aaaactgtgg ttacagaatt ctttaaaaaat 420
ggtgatatag ataattttgc aactggagcg gtagtaact gcaataatgg tggctaa 477

<210> 750
<211> 393
<212> DNA
<213> Homo sapiens

<400> 750
tgtaattcta atgataatga cactttaaaa aacaatgccc aacaaacaaa aagacgggga 60
aagcgtgatt taacccaaaa agaaacaaca caagaaaaac caaatctaa agaagaacta 120
cttagagaaa agctatctga cgatcaaaaa acacatcttg actgggttaa acccgcttta 180
actggtgctg gagaatttga caaattctta gaaaatgatg atgataaaat aaaatcagca 240
cttgatcata taaaaactca acttgatagt tgtaatgggt atcaagcaga acaacaaaaa 300
accactttca aaactgtggt tacagaattc tttaaaaatg gtgatataga taattttgca 360
actggagcgg ttagtaactg caataatggt ggc 393

<210> 751
<211> 157
<212> PRT
<213> Homo sapiens

<400> 751
Ile Leu Ile Ile Lys Lys Gly Val Thr Met Lys Ile Ile Asn Ile Leu
1 5 10 15

Phe Cys Leu Phe Leu Leu Met Leu Asn Gly Cys Asn Ser Asn Asp Asn

20 25 30
 Asp Thr Leu Lys Asn Asn Ala Gln Gln Thr Lys Arg Arg Gly Lys Arg
 35 40 45
 Asp Leu Thr Gln Lys Glu Thr Thr Gln Glu Lys Pro Lys Ser Lys Glu
 50 55 60
 Glu Leu Leu Arg Glu Lys Leu Ser Asp Asp Gln Lys Thr His Leu Asp
 65 70 75 80
 Trp Leu Lys Pro Ala Leu Thr Gly Ala Gly Glu Phe Asp Lys Phe Leu
 85 90 95
 Glu Asn Asp Asp Asp Lys Ile Lys Ser Ala Leu Asp His Ile Lys Thr
 100 105 110
 Gln Leu Asp Ser Cys Asn Gly Asp Gln Ala Glu Gln Gln Lys Thr Thr
 115 120 125
 Phe Lys Thr Val Val Thr Glu Phe Phe Lys Asn Gly Asp Ile Asp Asn
 130 135 140
 Phe Ala Thr Gly Ala Val Ser Asn Cys Asn Asn Gly Gly
 145 150 155

<210> 752
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 752
 Cys Asn Ser Asn Asp Asn Asp Thr Leu Lys Asn Asn Ala Gln Gln Thr
 1 5 10 15
 Lys Arg Arg Gly Lys Arg Asp Leu Thr Gln Lys Glu Thr Thr Gln Glu
 20 25 30
 Lys Pro Lys Ser Lys Glu Glu Leu Leu Arg Glu Lys Leu Ser Asp Asp
 35 40 45
 Gln Lys Thr His Leu Asp Trp Leu Lys Pro Ala Leu Thr Gly Ala Gly
 50 55 60
 Glu Phe Asp Lys Phe Leu Glu Asn Asp Asp Asp Lys Ile Lys Ser Ala
 65 70 75 80
 Leu Asp His Ile Lys Thr Gln Leu Asp Ser Cys Asn Gly Asp Gln Ala
 85 90 95
 Glu Gln Gln Lys Thr Thr Phe Lys Thr Val Val Thr Glu Phe Phe Lys
 100 105 110
 Asn Gly Asp Ile Asp Asn Phe Ala Thr Gly Ala Val Ser Asn Cys Asn
 115 120 125
 Asn Gly Gly
 130

<210> 753

<211> 453
<212> DNA
<213> Homo sapiens

<400> 753
tgaatatttaa taataaaaaa aggaataata atgaaaatta tcaacatatt attttgttta 60
tttttactaa tgctaaacgg ctgtaattct aatgatacta ataatagcc aacaaaaagt 120
agacaaaaac gtgatttaac ccaaaaagaa gcaacacaag aaaaaccta atctaaagaa 180
gaacttctta gagaaaagct aaatgataat caaaaaacac accttgactg gttaaaagaa 240
gctctgggca atgatggaga atttaataaa tttttaggat atgatgaaag caaaataaaa 300
tctgcacttg atcatataaa gagtgaactt gacagttgta ctggagataa gggtgaaaat 360
aaaaatacct tcaagcaggt cggtcaggag gcccttaaag ggggcataga cggctttgaa 420
aatactgcaa gtagtacgtg caaaaattca taa 453

<210> 754
<211> 369
<212> DNA
<213> Homo sapiens

<400> 754
tgtaattcta atgatactaa taatagccaa aaaaaagta gacaaaaacg tgatttaacc 60
caaaaagaag caacacaaga aaacctaata tctaaagaag aacttcttag agaaaagcta 120
aatgataatc aaaaaacaca ccttgactgg ttaaaagaag ctctgggcaa tgatggagaa 180
ttaataaat ttttaggata tgatgaaagc aaaataaaat ctgcacttga tcatataaag 240
agtgaacttg acagttgtac tggagataag gttgaaaata aaaatacctt caagcaggtc 300
gttcaggagg cccttaaagg gggcatagac ggctttgaaa atactgcaag tagtacgtgc 360
aaaaattca 369

<210> 755
<211> 149
<212> PRT
<213> Homo sapiens

<400> 755
Ile Leu Ile Ile Lys Lys Gly Ile Ile Met Lys Ile Ile Asn Ile Leu
1 5 10 15
Phe Cys Leu Phe Leu Leu Met Leu Asn Gly Cys Asn Ser Asn Asp Thr
20 25 30
Asn Asn Ser Gln Thr Lys Ser Arg Gln Lys Arg Asp Leu Thr Gln Lys
35 40 45
Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys Glu Glu Leu Leu Arg Glu
50 55 60
Lys Leu Asn Asp Asn Gln Lys Thr His Leu Asp Trp Leu Lys Glu Ala
65 70 75 80
Leu Gly Asn Asp Gly Glu Phe Asn Lys Phe Leu Gly Tyr Asp Glu Ser
85 90 95
Lys Ile Lys Ser Ala Leu Asp His Ile Lys Ser Glu Leu Asp Ser Cys
100 105 110
Thr Gly Asp Lys Val Glu Asn Lys Asn Thr Phe Lys Gln Val Val Gln
115 120 125
Glu Ala Leu Lys Gly Gly Ile Asp Gly Phe Glu Asn Thr Ala Ser Ser
130 135 140

Thr Cys Lys Asn Ser
145

<210> 756

<211> 123

<212> PRT

<213> Homo sapiens

<400> 756

Cys Asn Ser Asn Asp Thr Asn Asn Ser Gln Thr Lys Ser Arg Gln Lys
1 5 10 15

Arg Asp Leu Thr Gln Lys Glu Ala Thr Gln Glu Lys Pro Lys Ser Lys
20 25 30

Glu Glu Leu Leu Arg Glu Lys Leu Asn Asp Asn Gln Lys Thr His Leu
35 40 45

Asp Trp Leu Lys Glu Ala Leu Gly Asn Asp Gly Glu Phe Asn Lys Phe
50 55 60

Leu Gly Tyr Asp Glu Ser Lys Ile Lys Ser Ala Leu Asp His Ile Lys
65 70 75 80

Ser Glu Leu Asp Ser Cys Thr Gly Asp Lys Val Glu Asn Lys Asn Thr
85 90 95

Phe Lys Gln Val Val Gln Glu Ala Leu Lys Gly Gly Ile Asp Gly Phe
100 105 110

Glu Asn Thr Ala Ser Ser Thr Cys Lys Asn Ser
115 120